

Home Advantage in the UEFA Champions League: A Statistical Analysis of Factors Influencing Ball-in-Play

UEFA Şampiyonlar Ligi'nde Ev Sahibi Avantajı: Topun Oyunda Kalma Süresini Etkileyen Faktörlerin İstatistiksel Analizi

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Abstract

Purpose: The aim of this study is to compare home and away teams in terms of technical parameters affecting ball-in-play time in UEFA Champions League matches and to analyze the impact of home advantage on goal count and match outcomes. **Method:** The sample of the study consists of 138 matches played during the league phase of the 2024–2025 UEFA Champions League season. Data were obtained from the website mackolik.com, which sources its statistics from OPTA Sportsdata. Technical parameters such as total match duration, ball-in-play time, fouls, throw-ins, corners, offsides, goals, and match outcomes were analyzed. Independent samples t-tests and Chi-square tests were used for statistical analysis, with a significance level set at $p < 0.05$. **Results:** According to the findings, there were no statistically significant differences ($p > 0.05$) between home and away teams in terms of ball-in-play time and the technical parameters that affect it. However, home teams had significantly higher goal averages and win rates ($p < 0.05$). This indicates that home advantage is particularly evident in scoring and match results. **Conclusion:** In high-level competitions such as the UEFA Champions League, home advantage does not manifest in technical parameters but is clearly observed in score-related outcomes. These findings provide valuable strategic insights for coaches and performance analysts, especially in preparing for away matches.

Keywords Home-away team, UEFA Champions League, ball-in-play, football statistics, match analysis

ÖZ

Amaç: Bu çalışmanın amacı, UEFA Şampiyonlar Ligi müsabakalarında topun oyunda kalma süresini etkileyen teknik parametreler açısından ev sahibi ve deplasman takımlarını karşılaştırmak ve saha avantajının gol sayısı ile maç sonuçlarına etkisini analiz etmektir. **Yöntem:** Araştırmanın örneklemini, 2024–2025 UEFA Şampiyonlar Ligi sezonunun lig aşamasında oynanan 138 maç oluşturmaktadır. Veriler, istatistiksel bilgilerini OPTA Sportsdata'dan alan mackolik.com üzerinden elde edilmiştir. Toplam maç süresi, topun oyunda kalma süresi, fauller, taç atışları, köşe vuruşları, ofsaytlar, goller ve maç sonuçları gibi teknik parametreler incelenmiştir. İstatistiksel analizlerde bağımsız örneklem t-testi ve Ki-kare testi kullanılmıştır. Anlamlılık düzeyi $p < 0,05$ olarak belirlenmiştir. **Bulgular:** Elde edilen bulgulara göre, ev sahibi ve deplasman takımları arasında topun oyunda kalma süresi ve bunu etkileyen teknik parametreler açısından istatistiksel olarak anlamlı bir fark bulunmamıştır ($p > 0,05$). Ancak ev sahibi takımların gol ortalamalarının ve galibiyet oranlarının anlamlı düzeyde daha yüksek olduğu belirlenmiştir ($p < 0,05$). Bu durum, saha avantajının özellikle skor ve maç sonucu üzerinde belirgin olduğunu göstermektedir. **Sonuç:** UEFA Şampiyonlar Ligi gibi üst düzey karşılaşmalarda saha avantajı, teknik parametrelerde belirgin bir farklılık yaratmamakla birlikte skorla ilişkili performans çıktılarında açık şekilde görülmektedir. Elde edilen bulgular, özellikle deplasman maçlarına hazırlanırken teknik ekipler ve performans analistleri için önemli stratejik bilgiler sunmaktadır.

Anahtar Kelimeler Ev–deplasman takımı, UEFA Şampiyonlar Ligi, topun oyunda kalma süresi, futbol istatistikleri, maç analizi

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Introduction

Football is one of the most followed sports branches in the world in terms of its economic size and sociological effects. In modern football, besides physical performance, many factors such as psychological factors, strategic planning and statistical analyses are determinative. In this context, the scientific investigation of on-field and off-field variables affecting match performance has become one of the current study areas of sports sciences.

Football is a complex sport with high tempo and versatile physical, technical and tactical needs. Due to the nature of the game, physical loading and performance parameters are closely related not only to the total match time but also to the time the ball is actively in play (Altmann et al., 2023). The phenomenon of home advantage, characterised by the tendency for more than half of home teams to win in matches played under a balanced home and away fixture, has attracted considerable attention from researchers (Courneya and Carron, 1992; Ramchandani et al.) The sources of home advantage are generally categorised under four main headings: (1) spectator support, (2) pitch knowledge and familiarity, (3) lack of travel fatigue, and (4) conscious or unconscious biases in referee decisions (Carron, Loughhead, & Bray, 2005; Anderson & Pierce, 2009). The effects of these factors on objective measures of performance, particularly on goal scoring, match result and time on the ball, have become increasingly important.

When analysed on a team basis, home advantage can be defined as the superior performance of teams in home matches, such as earning more points, scoring more goals, etc. compared to their opponents. Numerous team-level studies around the world (Armatas and Pollard, 2012; Marek and Vavra, 2017; Pollard and Gomez, 2009) show that the vast majority of home teams benefit from this advantage. Recent studies have shown that the effect of home advantage is more pronounced in sports with higher levels of physical contact, especially due to the increased pressure on teams and referees due to spectator influence. Furthermore, research has shown that home advantage is also influenced by league level (Garcia et al. 2013; Pollard and Gómez, 2014; Marek and Vavra, 2020; Peeters Van Ours, 2021). Ramchandani et al. (2021) reported that home advantage rates ranged between 58% and 61% in professional football leagues in England. Pollard and Gomez (2014) found that home advantage exists in 157 national domestic football leagues worldwide by analysing matches played between 2006 and 2012. Inan stated that in five major European football leagues (Bundesliga, La Liga, Ligue 1, Premier League and Serie A), spectator support and stadium capacity have a significant impact on home advantage (Inan, 2020). Home teams performed particularly well in the Bundesliga, scoring 70.45% of the total points. In La Liga and Ligue 1, these rates increased to 71.65% and 71.51% respectively. In the Premier League and Serie A, the rates were 69.67% and 69.07% respectively. Boyko et al. analysed data such as goals scored, yellow cards, red cards and penalties in the Premier League and concluded that referees give more advantage to home teams (Boyko et al., 2007). In addition to this information, players generally experience higher self-confidence, motivation and concentration when playing at home, due to spectator support and familiarity with the stadium environment (Pollard et al. 2008). Furthermore, analysing the behaviour of players when playing at home or away enables the development of strategies to minimise or maximise the effect of home advantage. This allows home teams to further improve their performance, while for away teams it makes it possible to implement home advantage offsetting technical-tactical strategies. As a result, studying home advantage not only helps us to better

understand individual football performance, but also offers practical applications in strategic and tactical decision-making processes (Staufenbiel et al. 2015).

The UEFA Champions League represents the highest level of competition in football, as it is the most prestigious club-level football organisation in Europe. Since the quality differences between teams in elite tournaments such as the Champions League are relatively smaller, the effect of off-field factors (such as home advantage) on the match result may become more noticeable. When the literature is examined, it is seen that home-away studies are evaluated in terms of many parameters and analyses are made in terms of the character of the match and winning (Goumas, 2017; Gryko et al., 2020; Chacon-Fernandez et al. 2025). However, in this context, it is seen that the research on the parameters that may be effective in prolonging the match duration is limited. With the present study, it is aimed to evaluate these parameters in terms of home-away for the first time.

The main purpose of this study is to compare home and away teams in terms of parameters that may affect the time of possession in UEFA Champions League matches and to analyse the effect of home advantage on the number of goals and the match result. The research includes the analysis of the factors affecting the flow of the game such as time of possession, fouls, corners, throw-ins and offsides within the home-away distinction. In this respect, the study aims both to contribute to the existing literature on home advantage and to provide new data that can be used in technical-tactical analyses. The findings of the study can shed light on the decision-making processes for both sports scientists, coaches and analysts.

Method

Population and Sample

The population of the study consists of the UEFA Champions League, league stage matches of the 2024-2025 season. The sample consists of 138 football competitions in the league stage matches played in this process.

Data Collection Process

The data on football statistics used in the study were obtained from the mackolik (<http://www.mackolik.com>) website. Data resource of the website is OPTA Sportsdata Company. The inter-operator reliability of the company's tracking system (OPTA Client System) used to collect football match statistics was identified to have reached an acceptable level. The collected data consisted of total match time, time in possession, fouls, throw-ins, corner kicks, offside, goals scored, match result parameters.

Data Analysis

IBM SPSS Statistics (v25) programme was used for data analysis. Statistical significance level was accepted as $p < .05$. The parameters affecting the time the ball was in play for home and away teams were analysed with Independent Samples t-test. Chi-square test (χ^2) was used to test the significance level of the win/loss distribution of home and away teams. Mean, standard deviation (Std. Deviation) and standard error (Std. Error Mean) were used as descriptive statistics. P value <0.05 was accepted.

Results

In this study, 138 league stage matches played in the UEFA Champions League 2024-2025 season were analysed. When the winning home and away teams were compared in terms of technical parameters affecting the time the ball was in play, no statistically

significant difference was found. According to the results of independent samples t-test, the average of the home teams in terms of total time was 96.83 ± 2.92 minutes, while the average of the away teams was 96.23 ± 2.64 minutes, and this difference was not statistically significant ($p = 0.221$). Similarly, the mean of the home teams was 58.13 ± 5.03 minutes, while the mean of the away teams was 57.33 ± 4.41 minutes, and this difference was not significant ($p = 0.329$) (Table 1, Figure 1). There was no significant difference between the home and away teams in terms of the number of fouls, throw-ins, corners and offsides, which are other factors that may affect the time the ball is in play. While the average number of fouls of the home teams was 21.90 ± 6.61 , this value was 20.87 ± 4.58 for the away teams and the difference was not statistically significant ($p = 0.283$). Similarly, there was no significant difference between the two groups in the number of throw-ins ($p = 0.694$), corners ($p = 0.597$) and offsides ($p = 0.238$) (Table 1, Figure 2). These results show that technical stoppages, which have a direct effect on the time the ball is in play, do not vary significantly for the winning teams according to home or away status. However, in the analyses made in terms of the number of goals, the home advantage was evident. In the comparison made over all matches, the average goal of the home team was 2.04 ± 1.66 , while the average goal of the away team was 1.50 ± 1.48 and the difference was found to be statistically significant ($p = 0.005$) (Table 2). In addition, when the distribution of match wins of home and away teams was analysed, it was determined that home teams had 86 wins in 138 matches, whereas away teams had 52 wins. This distribution shows a statistically significant difference according to the chi-square test result ($p < 0.001$) (Table 3). When these findings are evaluated in general, it is seen that the home advantage does not have a direct effect on the playing time or the time the ball is in play; however, there is a significant superiority in favour of the home team in the outputs related to score production and match result.

Table 1. Statistical findings regarding the parameters affecting the ball in play of the winning teams according to the home-away situation

Parameters	Winner	N	Mean	Std. Deviation	Std. Error	p
Total duration	Home	86	96,83	2,919	0,315	0,221
	Away	52	96,23	2,647	0,367	
Ball in play	Home	86	58,13	5,036	0,543	0,329
	Away	52	57,33	4,409	0,611	
Foul	Home	86	21,90	6,607	0,712	0,283
	Away	52	20,87	4,585	0,636	
Throw in	Home	86	32,24	8,841	0,953	0,694
	Away	52	32,85	8,576	1,189	
Corner	Home	86	9,33	3,503	0,378	0,597
	Away	52	9,65	3,531	0,490	
Offside	Home	86	3,48	1,992	0,215	0,238
	Away	52	3,88	1,937	0,269	
Ball in play (%)	Home	86	60,097	5,661	0,610	0,644
	Away	52	59,653	5,340	0,740	

The parameters affecting the duration of the ball in play do not show statistically significant differences depending on whether it is the home or away team ($p > 0.05$).

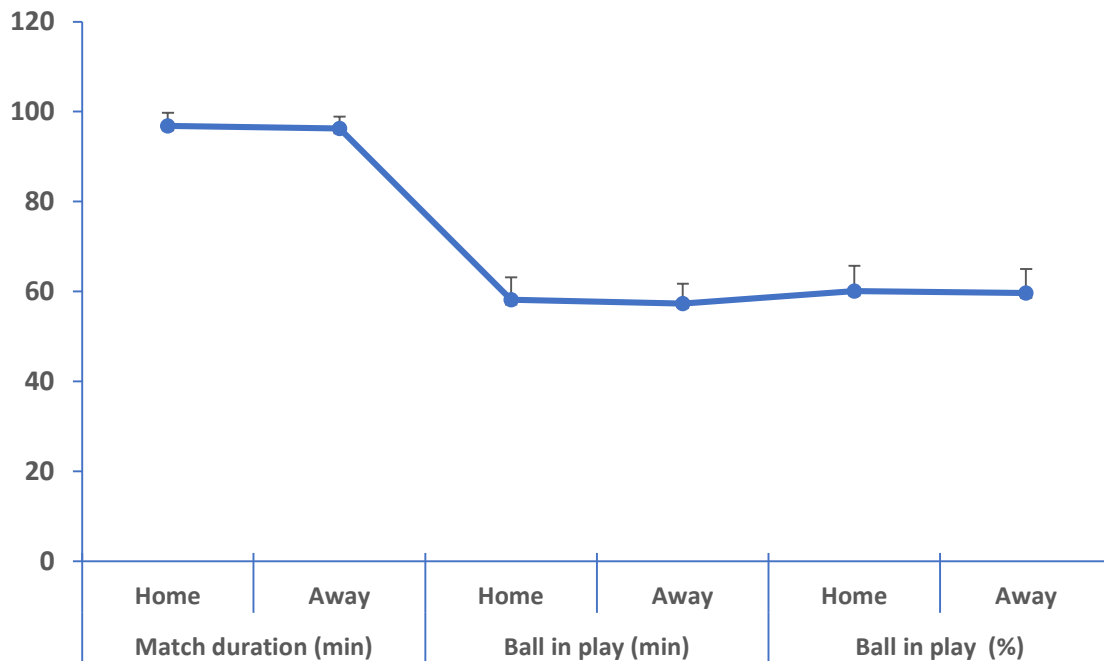


Fig 1. Home/Away (winners) match duration and percentile

There was no statistically significant difference between the ball in playing times and rates of the home and away teams in the matches won. Since the ball in playing times of the teams will increase when the total game time is extended, this situation is presented in the graph as a percentage.

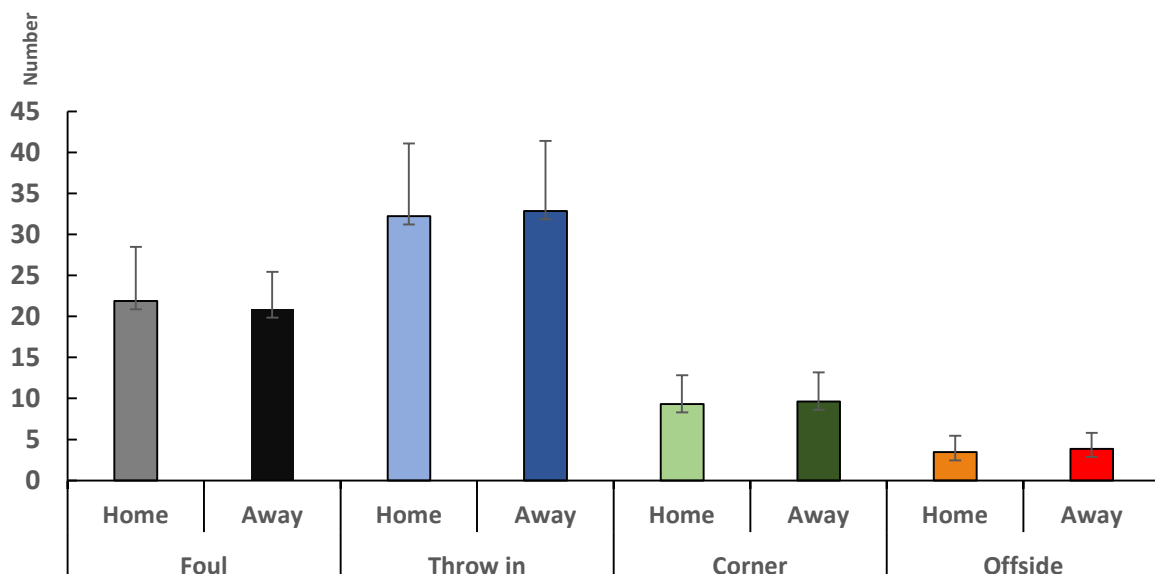


Fig. 2 The parameters affecting the ball-in play

When the numbers of fouls, throws in, corners and offsides in the matches won by the home and away teams were compared statistically, no significant difference was found.

Table 2. Comparison of home and away team goals

Teams	N	Mean	Std. Deviation	Std. Error Mean	p
Goal	Home	138	2,04	1,662	0,005
	Away	138	1,50	1,481	

The average goals of home teams in the Champions League were found to be statistically significantly higher ($p < 0.05$).

Table 3. Match result statistics for home/away teams

Parameter	Teams			p
	Home	Away	Total	
(Lose/Win)	Lose	52	86	138
	Win	86	52	138
Total	138	138	276	0,000

According to the research findings, the number of matches won by the home team was found to be statistically significantly high.

Discussion

The aim of the study is to compare the time of the ball in play and the number of fouls, crowns, corners and offsides among the factors affecting the time of the ball in the matches won by the home and away teams in the competitions played in the UEFA Champions League, league stage of the 2024/2025 season.

In the study, the parameters affecting the time the ball is in play do not show a significant difference according to being home or away team. This may be due to the fact that the players in a high-level organisation such as the Champions League have similar technical and tactical standards as well as their psychological states and do not have away anxiety. In addition, in a league where the best teams of Europe compete, it can be said that the efforts to gain 3 points for the team and the efforts to get a bonus and to show themselves for the players affect their tactical stopping behaviours. In a study conducted in five elite European leagues (LaLiga, Bundesliga, Serie A, Premier League and Ligue 1), no significant difference was found in the number of fouls of home and away teams (Chacon-Fernandez et al. 2025). No statistically significant difference was found in foul statistics in home and away competitions (Van Damme and Baert 2019). The time the ball is in play is seen as an important parameter for the home teams in winning the competition (Jerome et al. 2023). This is because factors such as constant fouls and throw-ins, which cause the game to pause and thus affect the tempo of the match, are not a positive situation for the home team. Home teams want to keep the game flow and attack continuity alive with more passing combinations. On the other hand, the away teams' behaviour of constantly tactically stopping the game in order not to lose the match has become a common situation in football (Han et al. 2022).

In the study, it was found that the goal averages and match winning rates of home teams were significantly higher than away teams. In a study conducted in five elite European leagues, it was found that home teams scored more goals (Chacon-Fernandez et al. 2025). Many studies have shown that home teams have higher win rates in home matches (Courneya & Carron, 1992; Nevill & Holder, 1999; Pollard, 2006). The main reasons for this phenomenon include crowded fan support, referee decisions, geographical factors, psychological factors, travelling fatigue of the away team, team tactics and many other factors (Almedia & Volossovitch, 2017; Carron et al., 2005; Pollard, 2008). In addition to these factors, the strength and quality of the opponent should also be included. Allen and Jones (2014), in a study covering 20 seasons (1992/1993-2011/2012) of the English Premier League, observed that the average goals scored and points gained at home were higher than the away averages, and Boyko et al. (2007) observed that the average goals scored by home teams was 1.5 and 1.1 for away

teams. In the present study, the goal average of the home teams was determined as 2.04. In this context, it can be said that home teams have more goal advantage.

There are many factors that influence the home team's goal advantage and match winning situations. Possible parameters are mentioned above. There are many studies in the literature that support the research finding. For example, Ramchandani et al. (2021) reported that home advantage rates in professional football leagues in England ranged between 58% and 61%. Pollard and Gomez (2014) analysed matches played between 2006 and 2012 and found that home advantage exists in 157 national domestic football leagues worldwide. Inan stated that spectator support and stadium capacity have a significant effect on home advantage in five major European football leagues (Bundesliga, La Liga, Ligue 1, Premier League and Serie A) (Inan, 2020). Home teams performed particularly well in the Bundesliga, scoring 70.45% of the total points. In La Liga and Ligue 1, these rates increased to 71.65% and 71.51%, respectively. In the Premier League and Serie A, the rates were recorded as 69.67% and 69.07% respectively. These studies support the findings of the presented study. Finally, Van Damme and Baert (2019) found that home advantage increased the probability of victory in matches played in the UEFA Champions League and UEFA Europa League between 2008 and 2016. In addition, they reported that the home advantage increases as the number of spectators increases and the relative power of the home team is higher, the goal difference, the chances of victory and the number of points obtained increase in favour of the home team. The finding of significant differences in the number of goals and winning percentage in favour of home teams supports the phenomenon of home advantage, which is frequently reported in the literature. Advantages such as spectator support, pitch knowledge, and not travelling are especially prominent in determinant factors such as score production and match result. It is also thought that referee decisions and psychological factors may also influence this outcome. Interestingly, when the technical data of the victorious teams are compared, no significant difference is found between home and away teams in terms of time on the ball and stoppage time. This suggests that victory is determined not only by quantitative indicators such as playing time or number of fouls, but also by qualitative parameters such as quality, strategy and effective offence. In this context, it can be stated that home advantage is not directly reflected in performance indicators such as time of possession, but rather in score-oriented outcomes. This result supports the home advantage model of Carron et al. (2005) and Courneya & Carron (1992).

Conclusions

According to the findings of this study, there is no significant difference between home and away teams in the UEFA Champions League in terms of the time the ball is in play and the technical parameters affecting this time. However, the statistically significant higher goal averages and number of wins of the home teams reveal that home advantage has an effect on score production and match result.

These results have important implications for tactical preparation, pre-match planning and away strategies. Coaches should focus more on the psychological and environmental components of the game in away matches, while federations should focus on approaches that minimise the impact of home advantage on decision-making processes in referee training.

In future research, analysing more in-depth factors such as fan density, travel distance, referee decisions and in-game tactical variations may help to better explain the complex nature of home advantage. Furthermore, comparative analyses across different leagues and tournaments can be conducted to more clearly illustrate the contextual characteristics of this advantage.

Limitations of the Study

In the study, contextual variables that may affect the home team's advantage, such as the ambience of the stadium where the competition will be played, weather and ground conditions, the away team's travel distance and the referee factor, were excluded from the analysis since they were not included in the dataset. In addition, the study covers the first Champions League, league stage matches organised with the new format in the 2024-2025 season. The lack of comparison with different championships, seasons and major national leagues reduces the generalisability of the findings. Only the data of the winning teams are used in the analyses. While this approach is useful for comparing some variables associated with winning, it does not reflect the performance in case of draws or defeats. Only numerical technical data were analysed in the study. The study does not take into account qualitative data such as the tactical thinking of the teams, preferred player profiles and attacking formations according to the competition, which limits the in-depth understanding of home advantage.

Kısaltmalar / Abbreviations

Parameters	→ Parametreler
Winner	→ Kazanan
N	→ Örneklem Sayısı
Mean	→ Ortalama
Std. Deviation	→ Standart Sapma
Std. Error Mean	→ Ortalama Hatası
p	→ Anlamlılık Değeri
f	→ Frekans
%	→ Yüzde
SPSS	→ Statistical Package for the Social Sciences

Beyanlar / Declarations

Etik Onay ve Katılım Onayı / Ethics approval and consent to participate

Bu çalışmanın hazırlanma ve yazım sürecinde “Yükseköğretim Kurumları Bilimsel Araştırma ve Yayın Etiği Yönergesi” kapsamında bilimsel, etik ve alıntı kurallarına uyulmuş olup; toplanan veriler üzerinde herhangi bir tahrifat yapılmamış ve bu çalışma herhangi başka bir akademik yayın ortamına değerlendirme için gönderilmemiştir. Makale ile ilgili doğabilecek her türlü ihlallerde sorumluluk yazara aittir.

During the preparation and writing of this study, the principles of scientific integrity, ethics, and citation, as stipulated in the “Higher Education Institutions Scientific Research and Publication Ethics Directive,” were fully observed; no falsification was made on the collected data, and this study has not been submitted to any other academic publication platform for evaluation. The author bears full responsibility for any potential violations regarding the article.

Veri ve Materyal Erişilebilirliği / Availability of data and material

Bu çalışmanın bulgularını destekleyen veriler, makul talepler üzerine sorumlu yazardan temin edilebilir. Veri seti yalnızca akademik amaçlar için erişilebilir olacak ve verilerin herhangi bir kullanımı, orijinal çalışmayı referans gösterecek ve katılımcıların gizliliğini koruyacaktır.

The data that support the findings of this study are available from the corresponding author upon reasonable request. The dataset will be accessible only for academic purposes, and any use of the data will recognize the original study and maintain the confidentiality of the participants.

Çıkar Çatışması / Competing interests

Yazarlar, bu makalede sunulan çalışmayı etkileyebilecek herhangi bir çıkar çatışması veya kişisel ilişkiye sahip olmadıklarını beyan etmektedirler.

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Yazar Katkıları / Authors' Contribution Statement

Çalışmanın tasarımı ve planlanması: İ.İ., F.A.; Veri toplama, analiz ve yorumlama: İ.İ., F.A.; Makale yazımı: İ.İ., F.A.; Veri düzenleme, yöntem geliştirme, yazım – özgün taslak, yazım – gözden geçirme ve düzenleme: İ.İ., F.A. Tüm yazarlar makalenin önemli noktalarını eleştirel bir şekilde gözden geçirmiş ve son hâlini onaylamıştır. Yazarlar çalışmaya eşit düzeyde katkı sağlamıştır.

Study design and planning: İ.İ., F.A.; Data collection, analysis, and interpretation: İ.İ.; Manuscript preparation: İ.İ., F.A.; Data organisation, methodology development, writing – original draft, and writing – review and editing: İ.İ., F.A. All authors have critically evaluated the essential components of the manuscript and approved its final version. The authors contributed equally to this work.

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References / Kaynaklar

- Allen, S.M. & Jones, M.V. (2014). The home advantage over the first 20 seasons of the English Premier League: Effects of shirt colour, team ability and time trends. *International Journal of Sport and Exercise Psychology*, 12(1):10-18.
- Almeida, C. H. & Volossovitch A. (2017). Home advantage in Portuguese football: effects of level of competition and mid-term trends. *International Journal of Performance Analysis in Sport*, 17(3): 244–255.
- Altmann, S., Ringhof, S., Neumann, R., Woll, A., & Rumpf, M. C. (2023). Effective playing time affects physical match performance in soccer: a new approach to match analysis. *Science and Medicine in Football*, 7(1): 10–16.
- Anderson, K., & Pierce, D. (2009). Officiating bias: The effect of foul differential on foul calls in NCAA basketball. *Journal of Sports Sciences*, 27(7): 687–694.
- Armatas, V. & Pollard, R. (2012). Home advantage in Greek football. *European Journal of Sport Science*, 14(2):116–122.
- Boyko, R.H., Boyko, A.R. & Boyko, M.G. (2007). Referee Bias Contributes to Home Advantage in English Premiership Football. *J. Sports Sci.* 25: 1185–1194.
- Carron, A. V., Loughhead, T. M. & Bray, S. R. (2005). The home advantage in sport competitions: Courneya and Carron's (1992) conceptual framework a decade later. *Journal of Sports Sciences*, 23(4): 395–407.
- Chacon-Fernandez, E.; Brunso-Costal, G., Duarte, A., Sanchez-Oro, J., Alonso-Perez-Chao, E. (2025). Home Advantage in Football: Exploring Its Effect on Individual Performance. *Appl. Sci.*15: 2242.
- Courneya, K. S. & Carron, A. V. (1992). The home advantage in sport competitions: A literature review. *Journal of Sport and Exercise Psychology*, 14(1): 13–27.
- Garcia, M.S., Aguilar, O.G., Marques, P.S., Tobio, G.T., Fernández Romero, J.J. (2013). Calculating Home Advantage in the First Decade of the 21th Century UEFA Soccer Leagues. *J. Hum. Kinet.* 38: 141–150.
- Goumas, C. (2017) Modelling home advantage for individual teams in UEFA Champions League football. *Journal of Sport and Health Science*, 6: 321–326.
- Gryko, K., Mikolajec, K., Marszałek, J., Adamczyk, J., Molik, B., Waśkiewicz, Z., Nikolaidis P. & Knechtel, B (2020). How did basketball teams win EuroBasket 2015? A non-standard analysis of performance based on passes, dribbling and turnovers. *International Journal of Performance Analysis in Sport*, 20(3): 339-356.
- Han, B., Yang, L., Pan, P., García-de-Alcaraz, A., Yang, C. & Liu, T. (2022). The influence of removing home advantage on the Chinese Football Super League. *BMC Sports Science, Medicine and Rehabilitation*, 14(1), 208.
- Inan, T. (2020). The Effect of Crowd Support on Home-Field Advantage: Evidence from European Football. *Ann. Appl. Sport. Sci.* 8.
- Jerome, B. W., Stoeckl, M., Mackriell, B., Seidl, T., Dawson, C. W., Fong, D. T., & Folland, J. P. (2023). The influence of ball in/out of play and possession in elite soccer: Towards a more valid measure of physical intensity during competitive match-play. *European Journal of Sport Science*, 23(9), 1892-1902.
- Lago, C., Casais, L., Dominguez, E., & Sampaio, J. (2007). The effects of situational variables on distance covered at various speeds in elite soccer. *European Journal of Sport Science*, 7(2), 103–112.
- Marek, P. & Vávra F. (2017, June 26–28). Home team advantage in English Premier League. [Paper presentation]. Mathsport International 2017 Conference, Padua, Italy.

- Nevill, A. M., & Holder, R. L. (1999). Home advantage in sport: An overview of studies on the advantage of playing at home. *Sports Medicine*, 28(4), 221–236.
- Peeters, T. van Ours, J.C. (2021). Seasonal Home Advantage in English Professional Football; 1974–2018. *Economist*, 169, 107–126.
- Pollard, R. & Gómez M. A. (2009). Home advantage in football in South-West Europe: Long-term trends, regional variation, and team differences. *European Journal of Sport Science*, 9(6), 341–352.
- Pollard, R. (2006). Home advantage in soccer: Variations in its magnitude and a literature review of the interrelated factors associated with its existence. *Journal of Sport Behavior*, 29(2), 169–189.
- Pollard, R., & Gómez, M. A. (2014). Components of home advantage in 157 national soccer leagues worldwide. *International Journal of Sport and Exercise Psychology*, 12(3), 218–233.
- Pollard, R., Silva, C. D., & Medeiros, N. C. (2008). Vantagem em casa no futebol no Brasil: diferenças entre clubes e efeitos de distância de viagem. *Rev Bras Futebol*, 1(1), 03-10.
- Ramchandani, G., Millar, R., Wilson, D. (2021). The Relationship between Team Ability and Home Advantage in the English Football League System. *Ger. J. Exerc. Sport Res.* 51, 354–361.
- Staufenbiel, K., Lobinger, B., Strauss, B. (2015). Home Advantage in Soccer—A Matter of Expectations, Goal Setting and Tactical Decisions of Coaches? *J. Sports Sci.* 33: 1932–1941.
- Van Damme, N. & Baert, S. (2019). Home advantage in European international soccer: Which dimension of distance matters? *Economics*, 13(1): 20190050.

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