



# UEFA EURO 2020: An Analysis on The First Goal and The First Half Lead in Football Matches

Gökhan HADİ<sup>1A</sup>, Kemal GÖRAL<sup>2B</sup>

<sup>1</sup> Selcuk University, Faculty of Sport Sciences, Turkey

<sup>2</sup> Mugla Sıtkı Kocman University, Faculty of Sport Sciences, Turkey

Address Correspondence to G. Hadi: e-mail: gokhanhadi@selcuk.edu.tr

(Received): 20/10/2022 (Accepted): 22.12.2022

A:Orcid ID: 0000-0003-3689-2007 : B:Orcid ID: 0000-0001-8030-2276

## Abstract

This study was carried out in order to analyze the goals scored in the competitions played in the UEFA EURO 2020 tournament and to examine how finishing the first half affects the outcome of the matches. In the research, a total of 142 goals scored in 51 matches played in the tournament, the distribution of goals in 15-minute periods, the contribution to the score by starting in the first 11 and coming from the bench, and the effect of finishing the first half ahead on the results of the matches were examined. The time interval for the most goals scored in competitions is 46-60. minutes (30 goals - 21.13%). In all the matches played in the tournament, the majority of the goals scored, such as 88.9%, were scored by the players who started the matches in the first 11. In all the matches played in the tournament, 73.33% of the teams that finished the first half ahead and 71.43% of the teams that scored the first goal left the matches with victory. As a result, based on the findings of the research, it can be said that reaching the first goal in the competitions and finishing the first half of the match emerge as a very important criterion in high-level tournaments such as the European Championship, where competitions with high difficulty levels are played.

**Keywords:** Football, EURO 2020, Competition, Analysis, Goal.

## UEFA EURO 2020: Futbol maçlarında ilk gol ve ilk yarıyı önde bitirme üzerine bir analiz

### Özet

Bu çalışma, UEFA EURO 2020 turnuvasında oynanan müsabakalarda atılan gollerin analiz edilmesi ve ilk yarıyı önde bitirmenin maçların sonucuna nasıl bir etki ettiğinin incelenmesi amacıyla yapılmıştır. Araştırmada, turnuvada oynanan 51 karşılaşmada atılan toplam 142 gol, gollerin 15'er dakikalık periyotlar halinde dağılımı, ilk 11'de başlayıp ve yedekten gelip skora katkı sağlama ve ilk yarıyı önde bitirmenin maçların sonucuna etkisi açısından incelenmiştir. Müsabakalarda en fazla golün atıldığı zaman aralığı, 46-60.dakikalar (30 gol - 21.13%) arasındaki periyottur. Turnuvada oynanan tüm müsabakalarda, atılan gollerin %88.9 gibi çok büyük bir çoğunluğu maçlara ilk 11'de başlayan oyuncular tarafından atılmıştır. Turnuvada oynanan tüm maçlarda, ilk yarılarda önde tamamlayan takımların %73.33'ü, ilk golü atan takımların ise %71.43'ü müsabakalardan galibiyetle ayrılmıştır. Sonuç olarak, araştırmada ortaya çıkan bulgulardan hareketle, zorluk düzeyi yüksek müsabakaların oynandığı karşılaşmalara sahne olan Avrupa Şampiyonası gibi üst düzey turnuvalarda, müsabakalarda ilk gole ulaşmanın ve karşılaşmanın ilk yarısını önde bitirmenin çok önemli bir kriter olarak ortaya çıktığı söylenebilir.

**Anahtar Kelimeler:** Futbol, EURO 2020, Müsabaka, Analiz, Gol.

## INTRODUCTION

Football is a team sport played with other parts of the body, excluding the hand, within the framework of certain rules and under certain field conditions, and the result is determined by goals scored or conceded (15). Today, FIFA (Federation Internationale de Football Association) has more member countries than the United Nations, in football, which has turned from a small sport to a worldwide popular phenomenon(25).Football is the most popular sport in the world and football performance depends on numerous factors.In football, players may not need to have outstanding capacity in any of these performance areas, but they should have a reasonable level in all areas (26).

In football, high-level tournaments such as the World Cup and the European Championship are held.The sample of this study is EURO 2020.EURO 2020 is the 16th European Football Championship tournament.In EURO 2020, national teams of 24 countries competed.The champion of the tournament was Italy, who defeated England with a penalty shootout in the final match (27).

Analysis methods based on scientific foundations have gained importance in football, which is an indispensable sport of today. From this point of view, it is clearly seen that match analysis is an indispensable performance evaluation method in football in terms of increasing the field performance and achieving success (8). Competition analysis can be mentioned as a tool developed in order to objectively record the data emerging in the competitions, to determine what the movements are and to obtain accurate statistical results (22).

The purpose of competition analysis is to increase the efficiency of our team and "how can we be successful?" is to answer the question. The measurement, evaluation, analysis and interpretation of the goals of athletes and team performances is an integral part of the scientific training and development of top-level teams. It is useful to analyze the data obtained from the competitions for the success of our team and to prepare a plan-program according to the result(13).

Aguado-Méndez et al 2021 states that when analyzing rival teams in matches, the most important elements to be studied are the phases of the competition and the analysis of strengths and weaknesses.On the other hand, Zileli et al 2017 states that it is an undeniable fact that the statistics obtained as a result of the competition analyzes do not fully

explain the score and provide information about the process. At this point, they emphasize that the important thing is that the coach and his team set out from a correct analysis and what they see and how they benefit from the analysis in this process.

One of the biggest benefits of competition analysis is that many parameters that make up football are separated and recorded on a regular basis while evaluating the performance, and it makes it possible to evaluate the team's movements during the match numerically (6).Scored goals have always been very important variables for analyzing the performance of teams in sports games, tournaments and championships (19). In low scoring sports like football, scoring the first goal in a match can be very important to winning the match (24). From this point of view, the aim of this study is to analyze the goals scored in the competitions played in the UEFA EURO 2020 tournament and to examine how the first half has an effect on the outcome of the matches.

## Method

In this paper, UEFA EURO 2020 competitions were analyzed and examined with respect to diverse variables. The data which was used in analysis for this research was gathered from the UEFA's (Union of European Football Associations) official web site (<https://www.uefa.com/>).

The parameters taken into consideration were:

- a) Time periods of goals (Divided into 15 minutes long 6 periods: 1st-15th min., 16th-30th min., 31th-45th min., 46th-60th min., 61st-75th min., 76th-90th min.)
- b) Starting in first 11 or contribution to score joining from the bench
- c) The effect of scoring the first goal on the outcome of the match
- d) The effect of leading the first half on the outcome of the match

Time periods of goals, contributing to score joining from the bench, starting in first 11 or contribution to score joining from the bench, the effect of scoring the first goal on the outcome of the match, the effect of leading the first half on the outcome of the match were manually analyzed with the pen and paper method. The obtained data were coded into the table with the manually. Data gathered was saved into the SPSS program, statistically interpreted with frequency and percentage calculations.

## RESULTS

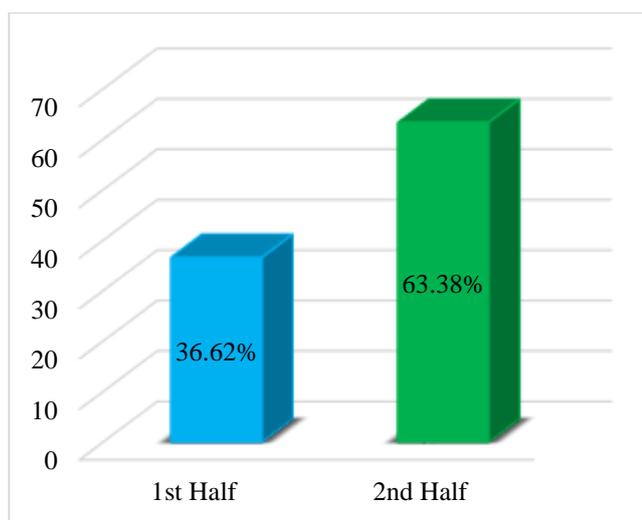
In this research, 51 (UEFA EURO 2020) competitions were analyzed and studied with respect to diverse variables. Goals scored are found as shown

Times	1-15 min.		16-30 min.		31-45 min.					
1st Half	Number of Goals	%	Number of Goals	%	Number of Goals	%				
	13	9.15	16	11.28	23	16.19				
Times	46-60 min.		61-75 min.		76-90 min.		Extra Time +91-105		Extra Time +106-120	
2nd Half	Number of Goals	%	Number of Goals	%	Number of Goals	%	Number of Goals	%	Number of Goals	%
	30	21.13	24	16.90	29	20.42	5	3.52	2	1.41
<b>Total</b>	<b>43</b>	<b>30.28</b>	<b>40</b>	<b>28.18</b>	<b>52</b>	<b>36.61</b>	<b>5</b>	<b>3.52</b>	<b>2</b>	<b>1.41</b>

In the all 51 games of tournament, 142 goals were scored in total, with an average of 2.78 goals per game. It has been reached to the highest number of goals (30 goals - %21.13) during the 15-minute time periods between the 46th – 60th mins.

1st Half		2nd Half		Total	
Number of Goals	%	Number of Goals	%	Number of Goals	%
52	36.62	90	63.38	142	100

Most of the 142 goals scored in the matches played in UEFA EURO 2020 (90 goals - 63.38%) occurred in the second half of the matches.



**Graphic 1.** Half of Goals Scored

below in tables according to the goals' time periods, players starting in first 11 or joining from the bench and contributing to the score, the effect of scoring the first goal on the outcome of the match, the effect of leading the first half on the score of the match.

**Table 3: In winner and loser teams; contribution to score by players starting in first 11 or joining from the bench**

	Winner Teams		Defeated teams		Draw matches		Total	
	n	%	n	%	n	%	n	%
Scoring by players starting in first 11	74	88.1	17	85	24	88.9	115	87.8
Scoring by players joining from the bench	10	11.9	3	15	3	11.1	16	12.2
<b>Total</b>	<b>84</b>	<b>100</b>	<b>20</b>	<b>100</b>	<b>27</b>	<b>100</b>	<b>131</b>	<b>100</b>

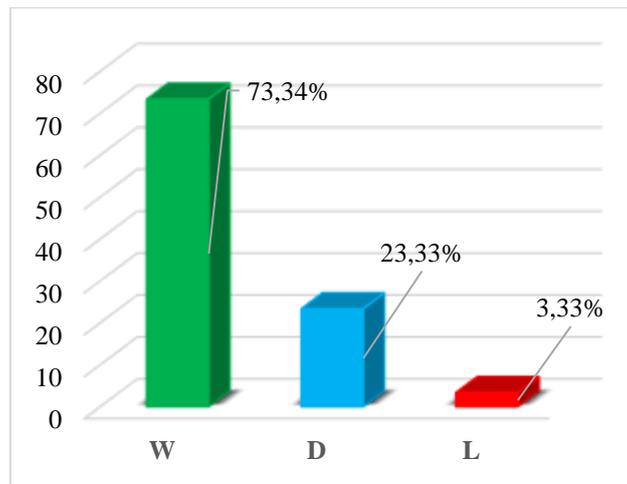
**Note:** 11 goals (%7.74) were scored in the games as own goal.

In all the matches played in the tournament, while the majority of the goals scored, such as 88.9%, were realized by the players who started the matches in the first 11, it was determined that only 11.1% of the goals scored were scored by the players from the bench. Players who started in the top 11 of the winning teams contributed to the score with 74 goals (88.1%), while players from the bench contributed 10 goals (11.9%). In the defeated teams, these rates were determined as 17 goals (85%) for the players who started in the first 11, and only 3 goals (15%) for the players who joined from the bench.

**Table 4: The effect of leading the first half on the score of the match**

Rounds	Win	%	Draw	%	Loss	%	Total	%
Group matches	17	77.27	4	18.18	1	4.55	22	100
Second Round	2	33.34	1	33.33	0	0	3	100
Quarter Final	3	75.00	1	25.00	0	0	4	100
Semi Final	0	0	0	0	0	0	0	0
Final	0	0	1	100	0	0	1	100
Total	22	73.34	7	23.33	1	3.33	30	100

When all the competitions played in the tournament are examined, 73.34% of the teams that finished the first half of the matches left the match with a win, 23.33% of them left the match with a draw, while only 3.33% of the teams that finished the first half left the field with a loss.

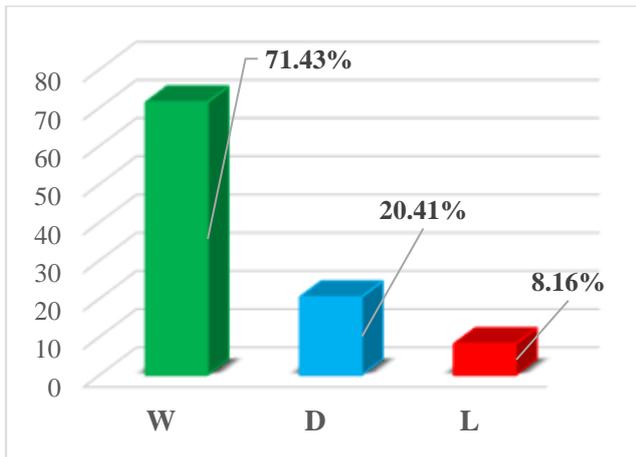


W: Win D:Draw L:Loss

**Graphic 2.** The effect of leading the first half on the score of the match**Table 5: The effect of scored first goal on the score of the match**

Rounds	Win	%	Draw	%	Loss	%	Total	%
Group matches	26	76.47	6	17.65	2	5.88	34	100
Second Round	6	75.00	1	12.50	1	12.50	8	100
Quarter Final	3	75.00	1	25.00	0	0	4	100
Semi Final	0	0	1	50.00	1	50.00	2	100
Final	0	0	1	100	0	0	1	100
Total	35	71.43	10	20.41	4	8.16	49	100

While 71.43% of the teams that scored the first goal in the competitions played in the tournament left the competitions, 20.41% of the matches ended in a draw. In the tournament, only 8.16% of the teams that scored the first goal in the competitions left the field in defeat.



**Graphic 3:** The effect of scored first goal on the score of the match

## DISCUSSION AND CONCLUSION

This study was carried out in order to analyze the goals scored in the competitions played in the UEFA EURO 2020 tournament and to examine how finishing the first half affects the outcome of the matches. While a total of 142 goals were scored in 51 games played in the tournament, the most goals scored in the competitions is between the 46th and 60th minutes. Goals scored have always been very critical variables to analyze teams' performances in sport games, tournaments and championships (20). In the literature, in many studies examining the time intervals of goals scored in football, it is seen that the second half (2,3,9,10,11,28) and final periods (2,3,9,10,11,16) of the matches are the sections where the most goals are scored.

In the study by Michailidis et al. 2013 in which the goal analysis of the 2012 European Football Championship was made, the majority of the goals scored (57.9%) were scored in the second half of the matches. In the study conducted by Çobanoğlu and Terekli 2018, the majority of the goals (61.2%) scored in the 2016 European Football Championship were scored in the second half of the matches. In the study in which the analysis of the 2010 World Cup was made by Njororai 2013, it was observed that the most goals were scored between the 76th and 90th minutes according to the time periods.

Armatas et al. 2009 found that the majority of the goals (54.1%) scored in the Greek League were scored in the second half of the matches, and the highest number of goals occurred between the 76th and 90th minutes according to the time periods. In the study by Gürkan et al. 2018, in which the goals scored in the Turkish Super League were examined according to

time periods, it was observed that the most goals were scored between the 76th and 90th minutes according to the time periods.

In the study in which the analysis of the 2012 European Football Championship was made by Leite 2013, the rate of winning the matches of the teams that scored the first goal was 70.97%. In the study by Bilgin and Müniroğlu 2022, in which the 2018 World Cup was analyzed, it was concluded that the teams that scored the first goal were the winners with 86%.

Molinuevo and Bermejo 2012 found that 74.45% of the matches in the Spanish Football League La Liga were won by the team that scored the first goal. Pratas et al. 2016 found that the teams scoring the first goal in the Portuguese Premier League generally won 70% of the matches. According to a study conducted by Göral et al. 2021, the home teams won 61.11% of the matches in the TFF 1st League and 72.97% in the Super League after their first goal in the competitions played in the 2019-2020 season. As a result, after the first goal scored in the matches played in both the Super League and the 1st League, the rate of leaving the match with a win was quite high.

In all the matches played in the tournament, 73.33% of the teams that finished the first half ahead and 71.43% of the teams that scored the first goal left the matches with victory. As a result, based on the findings of the research, it can be said that reaching the first goal in the competitions and finishing the first half of the match emerge as a very important criterion in high-level tournaments such as the European Championship, where competitions with high difficulty levels are played.

## REFERENCES

1. Aguado-Méndez RD, González-Jurado JA, Reina-Gómez Á and Otero-Saborido FM. Perceptions of Football Analysts Goal-Scoring Opportunity Predictions: A Qualitative Case Study. *Frontiers in Psychology*, 2021;12:735167. doi: 10.3389/fpsyg.2021.735167
2. Alberti G., Iaia FM., Arcelli E., Cavaggioni L., Rampinini E. Goal scoring patterns in major European soccer leagues. *Sport Sciences for Health*. 2013; 9(3), 151- 153.
3. Armatas V, Yiannakos A, Sileoglou P. Relationship Between Time and Goal Scoring in Soccer Games: Analysis of Three World Cups. *International Journal of Performance Analysis in Sport*, 2007; 7(2): 48-58.
4. Armatas, V., Yiannakos, A., Zaggelidis, G., Papadopoulou, S., Fragkos, N. Goal Scoring Patterns in Greek Top Leveled Soccer Matches. *Journal of Physical Education an Sport*, 2009; 23(2), 1-5.
5. Bilgin, S. & Müniroğlu, R.S. 2018 Dünya Kupası Maçlarının Teknik, Taktik ve Hareket Zaman İlişkisinin İstatistiksel Analizi. *SPORMETRE Beden Eğitimi ve Spor Bilimleri Dergisi*, 2022; 20(2), 105-116. DOI: 10.33689/spormetre.1088717

6. Bostancı, Ö., Ünver, Ş., Kabadayı, M., Şebin, K. & İmamoğlu, M. 2012-2013 Spor Toto Süper Lig Takımlarının Sezon Sonu Sıralamasına Etki Eden Faktörlerin İncelenmesi. Atatürk Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi,2017: 19(2), 78-88.
7. Çobanoğlu, H.O., & Terekli, M.S. 2016 Avrupa Futbol Şampiyonası: Gol Analizi. Türkiye Klinikleri Journal of Sports Sciences,2018: 10(3), 123-129.
8. Dinçer, Ö., Arı, E., Sözen, H., Erdoğan, E. & Cevahirioğlu, B. Profesyonel Futbol Takımlarının Alt Yapılarında Oynayan Genç Futbolcuların Profesyonel Futbol Ligleri İçin Performans Açısından Yeterlilik Düzeylerinin İncelenmesi. Spor ve Performans Araştırmaları Dergisi,2016:8(1), 35-46.
9. Doğan M, Doğan A, Alkan A. 2001-2002 Futbol Sezonunda Türkiye 1.Süper Liginde Atılan Gollerin İncelenmesi. Atatürk Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi,2004: 6(1): 1-10.
10. Göral K, & Saygın Ö. Birinci Ligde Yer Alan Bir Futbol Takımının Sezon Performansının İncelenmesi. International Journal of Human Sciences.2012:9(1): 1017-1031.
11. Göral, K. FIFA U-20 World Cup 2013: Analysis and evaluation of goals scored. RBFF-Revista Brasileira de Futsal e Futebol,2016: 8(28), 29-38.
12. Göral, K., Hadi, G. & Yıldırım, S. 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 Period . Turkish Journal of Sport and Exercise, 2021: 23(3), 345-352. Retrieve from <https://dergipark.org.tr/tr/pub/tsed/issue/68024/1007644>
13. Günay, M., Şıktar, E., & Şıktar, E. Antrenman Bilimi. Ankara: Gazi Kitabevi.
14. Gürkan, O., Ertetik, G., & Müniroğlu, S. (2018). Türkiye Süper Liginde atılan gollerin zaman dilimlerine ve türlerine göre incelenmesi. Journal of Human Sciences,2017: 15(1), 499-508. doi:10.14687/jhs.v15i1.4785
15. Hughes M, & Franks I. Analysis of Passing Sequences, Shots and Goals in Soccer. Journal of Sports Sciences,2005: 23(5): 509-514.
16. İnal, AN, Futbolda Eğitim ve Öğretim. Ankara: Nobel Akademik Yayıncılık,2013: 4.Baskı.
17. İmamoğlu O, Çebi M, & Kılıçgil E. 2006 FIFA Dünya Kupası'ndaki Gollerin Teknik ve Taktik Kriterlere Göre Analizi. Spormetre Beden Eğitimi ve Spor Bilimleri Dergisi.2007: V(4): 157-165.
18. Lago-Peñas C, Lago-Ballesteros J, Dellal A, & Gómez M. Game-related Statistics That Discriminated Winning, Drawing and Losing Teams From the Spanish Soccer League. Journal of Sports Science and Medicine.2010: 9: 288-293.
19. Leite, S. W. Analysis of goals in soccer World Cups and the determination of the critical phase of the game. Physical Education and Sport,2013: 11(39), 247-253.
20. Michailidis C, Michailidis Y, Mitrotasios M, & Papanikolaou Z. Analysis of Goals Scored in the Uefa Champions League in the Period 2009/2010. Serbian Journal of Sports Sciences,2013: 7(2): 51-55.
21. Michailidis, Y., Michailidis, C., & Primpa, E. Analysis of goals scored in European Championship 2012. Journal of Human Sport & Exercise,2013: 8(2), 367-375.
22. Molinuevo, J.S., & Bermejo, J.P. El efecto de marcar primero y la ventaja de jugar en casa en la liga de fútbol y en la liga de fútbol sala de España. Revista de Psicología del Deporte,2012: 21(2), 301-308.
23. Müniroğlu, S., Deliceoğlu, G. (2008). Futbolda Müsabaka Analizi ve Gözlem Teknikleri. Ankara: 2008: Ankara Üniversitesi Basımevi.
24. Njororai, W.W.S. Analysis of goals scored in the 2010 World Cup Soccer Tournament Held in South Africa. Journal of Physical Education and Sport,2013 13(1), 6-13.
25. Pratas, J.,M., Volossovitch, A., & Carita, A. The effect of performance indicators on the time the first goal is scored in football matches. International Journal of Performance Analysis in Sport,2016: 16, 347-354
26. Stein, M., Janetzko, H., Breitreutz, T., Seebacher, D., Schreck, D., Grossniklaus, M., Couzin, I.D., & Keim, D.A. Director's Cut: Analysis and Annotation of Soccer Matches. in IEEE Computer Graphics and Applications,2016: 36(5), 50-60. doi: 10.1109/MCG.2016.102.
27. Stølen, T., Chamari, K., Castagna, C., Wisløff, U. Physiology of Soccer. Sports Med 2005: 35, 501-536. <https://doi.org/10.2165/00007256-200535060-00004>
28. UEFA (Union of European Football Associations) 2020. <https://www.uefa.com/>
29. Yiannakos A. & Armatas V. Evaluation of the goal scoring patterns in European Championship in Portugal 2004. International Journal of Performance Analysis in Sport,2006: 6(1), 178-188.
30. Zileli R, Söyler M, & Genç A. 2016-2017 Turkcell Süper Liginde Oynanan Maçlarda Kullanılan Köşe Vuruşlarının Maç Analizi. İnönü Üniversitesi, Beden Eğitimi ve Spor Bilimleri Dergisi (İÜBESBD),2017: 4(3): 48-58.