

# Analysis of Serbia UEFA Futsal Euro 2016 Competitions in Terms of Some Variables

Kemal G ural

Correspondence: Kemal G ural, Mugla Sitki Kocman University, Turkey.

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## Abstract

The purpose of this study is to analyze the Serbia UEFA Futsal Euro 2016 competitions in terms of some variables. Range of goals scored by winner and defeated teams in form of 5 minute periods, shots on goal, corner, contributing to the score by starting 5 and substitutes, fouls, yellow-red cards, the range of goals according to shot techniques and goal zones were examined. While a total of 129 goals were scored with an average of 6.45 goals per game, with 25 goals (19.38%) most goals was scored between 36 and 40 minutes. 41.1% of goals were scored in penalty area, 58.9% of goals were scored from outside penalty area. While the rate of shots on goal in winner teams was 55.6%, this rate in defeated teams was 44.4%. In winner teams the players started in first 5 scored 50 goals (56.8%) and players joined from bench scored 38 goals (43.2%) and in defeated teams the first 5 scored 21 goals (60%) and the players joined from bench scored only 14 goals (40%). Winner teams while playing with flying keeper has scored 1 goal (16.7%) and conceded no goal; also, the defeated teams have scored 5 goals (83.3%) and conceded 13 goals when flying keeper in game. Substitutions in winner teams scored 133 goals, in defeated teams only 31 goals were scored by substitutions. As a result; accurate shots on goal, scoring in between 36-40th minutes, starting in first 5 and also joining from bench are accepted as an important factor to win a match, but despite providing an advantage of attacking with more player, the flying keeper tactic is not considered an effective element of winning the game according to the analysis of the data.

**Keywords:** futsal, competition, analysis, goal

## 1. Introduction

As described as a form of football (soccer), Futsal is a worldwide game with amateur, semi-professional and professional organization and playing levels (Moore et al., 2014). In Portuguese “Futebol De Salao” and Spanish “Futbol De Sala” but in short and international term “Futsal” has been officially recognized by the international football management foundation FIFA (Federation de Football Association), and is verbalized as football which played in (indoor) sports halls. The professional leagues exist in Brazil, Italy, Spain, Portugal, France and many other countries. Futsal, outshining with dribbling, ball control techniques and shooting styles is a very entertaining sports game for spectators (Barbero-Alvarez et al., 2009; Altin & Kivrak, 2014; Ocak & Bugdayci, 2011).

Futsal, considering the unique and specific game field, ball and rules, generating creative, loyal to the team discipline, always in motion, fast, accurate, quick thinking, non-sticking to their positions, treasuring assistance, loyal to defense and attack strategies players and sportsmen (Balyan, Katipoglu & Vural, 2016). While there is no offside rule in Futsal, players may move to anywhere in the field and play along. The only restricted player in this game is the goalkeeper. The goalkeepers must not possess the ball for more than 4 seconds in his teams’ field but in opponent teams’ field goalkeepers may possess the ball as long as they want. This rule has brought out a strategy called as “Flying keeper” resulting in all players of a team playing in the opponents’ field while leaving their goal with no defense, in other words, empty (Skubala & Burkett, 2015).

In Futsal European Championships organized by UEFA, first in 1996, later in 2001, 2005, 2007, 2010, 2012, and finally in 2016 Serbia Championship (10th) Spain has won the cup seven times. On the other hand, Italy twice (2003, 2014) and Russia once (1999) have become the champion (Union of European Football Associations, 2016; Balyan, Katipoglu & Vural, 2016).

Respected as Football’s fellow sports branch the Futsal, compared to the football that might be in the most crucial place throughout the world, is a field where there are very limited researches and resources available yet (Moore et al., 2014; Amaral & Garanta, 2005).

When international literature is studied, it can be seen that many research is available examining futsal player’s physical and

physiological features (Barbieri et al., 2012; Matos et al., 2008; Berdejo-del-Fresno, 2012; García-Jiménez et al., 2011; Hosseini et al., 2012; Milanović et al., 2011, etc.) but only a few researches are present examining competition analysis and team performance (Alvurdu, 2013; Leite, 2013; Goral & Saygin, 2014; Müller, Da Costa & Garganta, 2016, etc.). At this point, the purpose of this research is to examine the competitions of UEFA Euro 2016 championship in Serbia about some variables.

## 2. Method

In this paper, UEFA Futsal 2016 competitions were analyzed and examined for various variables. The data which was used in the analysis for this research was gathered from the international TV channels broadcasting the competitions and also from the UEFA's (Union of European Football Associations) official website.

The parameters taken into consideration were:

- Time frames of goals (Divided into 5 minutes long 9 periods: 1st-5th min., 6th-10th min., 11th-15th min., 16th-20th min., 21st-25th min., 26th-30th min., 31st-35th min., 36th-40th min. and First extra time 41st-45th min.)
- Shots and shots on goal
- Corner kicks
- Fouls
- Yellow and red cards
- Starting in first 5 or contribution to scoring joining from the bench
- Shooting techniques (Foot, head, other.)
- Shooting (goal) areas (Inside the penalty area, outside the penalty area, left, right or center field)
- Variances of scoring or conceding goals while flying keepers in the game

Technical parameters such as shootings, accurate shots, shots on goal, corner kicks, shooting (goal) areas, etc. were analyzed with e-Analyze Soccer computer program. Time frames of goals, contributing to scoring joining from the bench, red and yellow cards, foul counts, goals scored or conceded while flying keeper in the game and other parameters were manually (pen and paper) analyzed. Data gathered was saved into the SPSS computer program; statistically interpreted with frequency and percentage calculations.

## 3. Findings

In this research, 20 (UEFA Futsal Euro 2016) competitions were analyzed and studied concerning various variables. Goals scored are found as shown below in tables according to the goals' time frames, shots, accurate shots, corner kicks, players starting in first 5 or joining from the bench and contributing to the score, foul counts, yellow and red cards, goal's shooting techniques and shooting areas and finally goals scored and conceded while flying keepers in game.

Table 1. Times of Goals Scored

Times	1-5 min.		6-10 min.		11-15 min.		16-20 min.		Total	
1st Half	Goals	%	Goals	%	Goals	%	Goals	%	Goals	%
	7	5.42	15	11.63	14	10.84	18	13.95	54	41.84
Times	21-25 min.		26-30 min.		31-35 min.		36-40 min.		Total	
2st Half	Goals	%	Goals	%	Goals	%	Goals	%	Goals	%
	18	13.95	15	11.63	16	12.40	25	19.38	74	57.36
Times	41-45 min.								Total	
1st Extra Times	Goals	%							Goals	%
	1	0.80							1	0.80
Total	26	20.15	30	23.26	30	23.26	43	33.33	129	100

In the all 20 games of tournament, 54 goals with an average of 2.7 goals (41.84%) out of 129 in total have been determined as scored during the first periods, 74 goals with an average of 3.7 goals (57.36%) during the second periods and only 1 goal (0.80%) during the first extra times. It has been reached to the highest number of goals (25 goals - 19.38%) during the final 5-minute time frames (between the 36th – 40th mins).

Table 2. Winner and loser teams' numbers of shooting, accurate shots, corner kicks, fouls, yellow and red cards.

Variables	Winners		Losing teams		Total	
	n	%	n	%	n	%
Shots	599	53.92	512	46.08	1111	100
Shots on goal	288	55.60	230	44.40	518	100
Corner kick	177	51.00	170	49.00	347	100
Foul	104	45.22	126	54.78	230	100
Yellow card	18	32.7	33	60.00	55	100
Red card	1	33.33	2	66.67	3	100

When shotings are examined, it can be seen that 599 (53.92%) of all 1111 shots came from the winning teams and defeated teams responded to this rate with 512 (46.08%) shotings. On the other hand, out of all 518 accurate shots, 288 (55.60%) shots came from the winning teams and defeated teams could only reach the number of 230 (44.40%). Throughout the tournament, corner kick numbers were close to each other in both sides with 177 (51.00%) from the winning teams and 170 (49.00%) from the defeated teams. When looked into the numbers of fouls; it can be noticed out of all 230, 104 (45.22%) fouls coming from the winning teams, and 126 (54.78%) fouls coming from defeated ones. In all 20 matches, 55 yellow cards were shown with an average of 2.75 cards per game, and 3 red cards with an average of 0.15 cards per game. Winner teams were given 18 (32.7%) yellow cards and 1 (33.3%) red card; defeated teams 33 yellow cards (60%) and 2 red ones (66.67%). 4 of the all the yellow cards (7.3%) were shown in the matches ended in a draw.

Table 3. In winner and loser teams; contribution to score by players starting in first 5 or joining from the bench

Variables	Winner Teams		Defeated teams		Total	
	n	%	n	%	n	%
Scoring by players starting in first 5	50	56.8	21	60.0	71	57.7
Scoring by players joining from the bench	38	43.2	14	40.0	52	42.3
Total	88	100	35	100	123	100

Note: 3 goals (2.32%) were scored in the games ended in draw and another 3 goals (2.32%) as own goal.

In winner teams, players started in first 5 scored 50 (56.8%) goals and players joining from the bench scored 38 (43.2%) goals contributing to the game. For defeated teams, these rates occurred as 21 goals (60%) by players starting in first 5 and only 14 goals (40%) by players joining from the bench.

Table 4. Variances of goals according to shoting techniques and goal areas

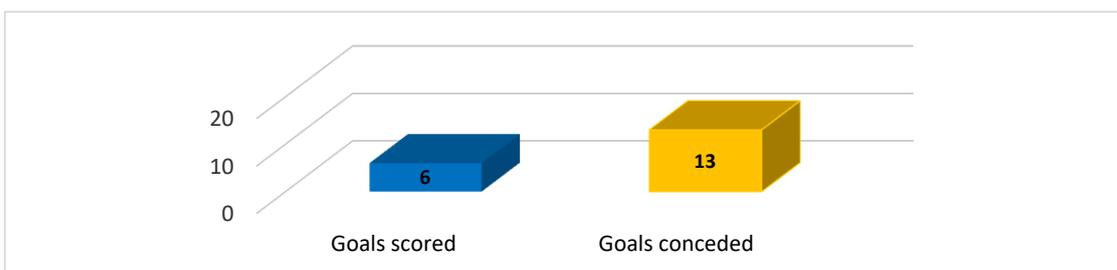
Goal areas	Left Field		Right Field		Center Field		Total	
	Goal	%	Goal	%	Goal	%	Goal	%
	31	24.03	37	28.68	61	47.29	129	100
Goal areas	Inside the penalty area				Outside the penalty area		Total	
	Goal	%	Goal	%	Goal	%	Goal	%
	53	41.1	76	58.9	129	100		
Shoting techniques	Foot		Head		Other		Total	
	Right Foot	Left foot	Goal	%	Goal	%	Goal	%
	66	51.16	58	44.96	2	1.55	3	2.33
Total	124		96.12		2	1.55	3	2.33
							129	100

Of all the goals, 31 (24.03%) have been scored from the left, 37 (28.68%) from the right and 61 (47.29%) from the middle field. 53 (41.1%) goals have been shot from inside the penalty area and 76 goals (58.9%) from outside the penalty area. As 66 (51.16%) with the right foot and 58 (44.96%) with left, in total 124 (96.12%) goals have been scored via foot shotings, 2 goals (1.55%) via head shotings. 3 goals (2.33%) have been scored an own goal (to own).

Table 5. Goals scored and conceded while flying keeper in game.

Variables	Winner teams		Defeated teams		Total	
Goals scored while flying keeper in game	1	16.7%	5	83.3%	6	%100
Goals conceded while flying keeper in game	0	0.00%	13	100%	13	%100

Winner teams found 1 goal (16.7%) while playing with the flying keeper and defeated teams found 5 (83.3%) goals. On the other hand, winner teams conceded no goal while playing with the flying keeper and defeated teams conceded 13 goals.



Graphic 1. Goals scored and conceded while fly keeper in game

#### 4. Discussion and Conclusion

Goals scored have always been very critical variables to analyze teams' performances in sports games, tournaments and championships (Michailidis et al., 2013). In all UEFA Futsal Euro 2016 competitions, 129 goals have been scored in total with an average of 6.45 goals per game. 19 (95%) matches out of 20 have ended with a winner and a defeated party in the tournament. Winner teams scored 88 goals (71.54%) in total with an average of 4.63 goals per game, and this value has been 35 goals (28.46%) with an average of 1.84 goals per game for the defeated parties. Final 5-minute time frames of the matches' first and second periods have been the highest goal scoring parts of all games, and in these minutes 43 (33.33%) goals have been scored in total. According to Abdel-Hakim's study (2013) in the Futsal World Cup Thailand 2012, the highest number of goals (32.95% – 115 goals) have been reached within the 31-40 minutes.

When literature examined, in many papers (Goral & Saygin, 2012; Giampietro et al., 2013; Goral & Saygin, 2014; Armatas et al., 2007; Goral, 2016; Imamoglu et al., 2007; Dogan, Dogan & Alkan, 2004) it can be seen that the competitions' final periods and time frames are the parts of the games where the most goals were scored.

While winner teams' shooting rate was 53.92% and the defeated teams' shooting rate was 46.08%, winner teams' accurate shots rate have been determined as 55.60% and in response to this value defeated teams' accurate shots rate have been determined as 44.40%. Another statistical info out of the data analysis is that the winning teams were to foul less (45.22%) than defeated teams (54.78%). Winner teams have been shown 18 yellow cards (32.7%) and 1 red card (33.3%); defeated teams 33 yellow cards (60%) and also 2 red cards (66.67%). Furthermore, in a match, ended in a draw, players have been shown 4 yellow cards (7.3%).

In research, which studies 2012 Futsal World Cup, data analysis shows that the winning teams come forward with more accurate shots with the number of 815 shots (62.2%) than defeated ones with 499 (37.8%) (Goral & Saygin, 2014). In another research, which studies the Turkish National Futsal Team's group matches with a tactical and technical approach at UEFA 2012 Futsal Euro, Alvrdu (2013) remarks that winner teams' positive (accurate) shot numbers are much greater than defeated teams. Lago-Peñas et al. (2010) in their study analyzing the winner and defeated teams in the Spanish Soccer League, found the winner teams accurate shot rates as 46.2%. According to Hughes and Franks' (2005) research, successful football teams' goal and shot analysis shows that the winning teams' accurate shot rates are greater than the defeated parties. Goral (2016) finds in his research in which he analyzes the 2013 U-20 World Cup, which the winning teams' shooting, accurate shot, and corner kick numbers are significantly higher than the defeated teams.

In UEFA Futsal Euro 2016, at winning teams, players starting in first 5 scored 50 goals (56.8%) and players joining from the bench scored 38 goals (43.2%); for defeated teams 21 goals (60%) was scored by the players starting in first 5 and by the players joining from the bench only 14 goals (40%) was scored. Players joining from the bench at winning teams contributed to scoring as nearly much as the players started in first 5. This instance could be evidence that the players joining from the bench might be one of the most critical variables affecting the results of the matches. According to Altin and Kivrak (2014), all of the players must be ready all the time for any changes in the field. Players must re-position themselves quickly and adequately for changing parameters such as in-field settings, ball positions, player strategies, etc. Analyzing in-game situations, opponent players' movements and acting accordingly without losing any time might be a significant determinant of winning or losing a match.

Playing with the fly-keeper is a crucial tactic for a team, which allows attacking with more players. This kind of tactic increases the rate of ball possession and chance of scoring. When fly-keeper in game, the team playing with fly-keeper may move to the opponent's field and attack area with all of the team's players. This tactical move means more attacking players than standard gameplay and more powerful game (Skubala & Burkett, 2015). Flying keeper has to have some strong technic skills and must not take the ball into the game improperly. Above all, attacks started with flying keeper must be finalized to accomplish the exact gameplay, strategy and to avoid turnovers (ball loss/counter-attack) (Gunay, Yuce & Ocak, 2017). In any case of ball possession, since the goalkeeper is only able to touch the ball once in his territory and while in opponents' territory there is no such rule for him, he may stay in the attack zone. However, while playing and attacking with flying keeper strategy, in a case that the defense team wins the ball, the opponents may, and this situation might result in conceding a goal (Skubala & Burkett, 2015).

In Vicente-Vila and Lago-Peñas' (2016) study on goalkeepers and their activities in soccer games, it is remarked that even though the ball possession rate increases while flying keeper in game attacking 5 to 4 players, 131 attacks (80.4%) out of 163 positions examined resulted with no score. In UEFA Futsal Euro 2016, it can be seen that the teams mostly exercised the flying keeper tactic when they fall behind the opponent team throughout the tournament. In this tournament, winner teams scored only 1 (16.7%) goal while playing with the flying keeper and defeated teams, on the other hand, scored 5 goals (83.3%). However, while playing with the flying keeper, winner teams conceded no goal and, in response to this finding, defeated teams conceded 13 goals. Despite the importance of this tactic since it is giving the advantage of attacking with more players, according to the data analysis in this research, playing with flying keeper may not be a critical action to restore balance at the scoreboard or winning the game.

As conclusions; accurate shots, scoring in between 36-40 minutes, contributing to scoring by players joining from the bench as much as starting in first 5 might be considered as important factors to winning the match in futsal. Besides, playing with flying keeper strategy that is considered as a remarkable tactic seems not to be a critical determinant of winning the game according to this data analysis.

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