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Original article

IMPACT OF FOOTBALL SET-PIECES IN THE EUROPEAN CLUB TOURNAMENTS IN THE 2022/2023 SEASON

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Abstract

Aim. This research aims to analyze the success of teams in Europe's strongest club tournaments, the UEFA Champions League and the Europa League, focusing on the role of set-pieces (set plays) in goal scoring.

Methods. The study covers the period from September 2022 to June 2023. Modern video processing tools were used for data collection and analysis, including Wyscout for video recording and Hudl Studio for video editing and presentation. Mathematical and statistical methods were used to process the data. A total of 372 goals from 125 Champions League matches and 381 goals from 141 Europa League matches were analyzed.

Results. In the Champions League, 59 goals were scored from set-pieces, and 34 penalties were converted. In the Europa League, 67 goals were scored from set-pieces, and 35 penalties were converted. These findings highlight the critical importance of set pieces in generating scoring opportunities and determining match outcomes.

Conclusions. The in-depth analysis of UEFA's elite tournaments shows that set pieces play a crucial role in modern football at the highest level. These moments provide significant scoring opportunities and influence the top table positions in European club competitions.

Keywords: Soccer; set-pieces; champions league; corner-kicks; soccer goals.

Introduction

All aspects of the game are constantly improving and the demands from football players are higher than ever regarding their technical, tactical, and physical performance (Gutsev, 2023; Ivanov & Gutsev, 2024). In the world of football, standard situations (set-pieces) are akin to strategic symphonies conducted amidst the chaos of the pitch. These precise plays, including corner kicks, direct free kicks, indirect free kicks, and throw-ins, add unpredictability to the popular game. Set-pieces are like controlled 'experiments' in football, where the laws of physics, geometry, and human performance come together to create moments of precision and unpredictability. Advanced tools and methodologies should be used to observe and analyze gameplay, allowing for precise measurement of potential evolutionary trends in football and set-pieces (Castellano, 2009). As legendary physicist Albert Einstein once said, "In the midst of difficulty lies great opportunity," and in the realm of football, set pieces epitomize that sentiment, turning seemingly insurmountable challenges into golden opportunities. In this research, we will reveal the statistical data of the set-pieces in attack and defense that happened during the strongest European tournaments - "Champions League" and "Europa League" in the season 2022/2023. During their performance, the dynamics of open play are temporarily removed, as the ball is stationary and the opponents must be located at a certain distance from the ball (Maneiro, Casal, Ardá & Losada, 2019). According to (Mitrotasios et al., 2021; Mombaerts, 2000) and the data from the World Cups in 2018 and 2022, the goals resulting from them are becoming more and more decisive and predetermine the outcome of a matches even between markedly equal opponents. In their research, (Beare & Stone, 2019), and (Strafford, Smith, North & Stone, 2019), identified set pieces as critical to teams' attacking performance. In World Cup 2018 (Russia) was seen that 36.3% (57 goals) were scored from set-pieces (Çobanoğlu, 2019). In this sense, tactics in all phases of the game unite almost all the requirements that a football player must meet in order to be able to score or prevent a goal (Simeonov, 2015). Gadzhev, Stoilov & Dimitrova observe that there are other means leading to shots on goal and scored goals - ball possession (Gadzhev et al, 2024).

In 2023, Ben King's research for set-pieces in the English premier league shows that the league table without goals from set play is different. Premier League (22/23) in Table 1 without set-piece goals: Arsenal crowned champions at the expense of Manchester City, Brighton is in the Champions League places instead of Manchester United, and relegated Leicester stay in the top tier in England. This data shows the crucial impact of corners, free-kicks, and penalty kicks on the final ranking of the most popular championship in the world (King, 2023).

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Table 1. Standings without goals from set-pieces in Premier League 2022-2023 (King, 2023)

Position Without Set Piece Goals	Position	Position Difference	Club	Goal Difference	Points	Points Without Set Piece Goals	Goal Difference Without Set Piece Goals	Points Difference
1	2	+1	Arsenal	45	84	83	41	-1
2	1	-1	Man City	61	89	81	49	-8
3	4	+1	Newcastle	35	71	72	27	+1
4	6	+2	Brighton	19	62	72	25	+10
5	3	-2	Man Utd	15	75	72	14	-3
6	7	+1	Aston Villa	5	61	61	10	0
7	8	+1	Tottenham	7	60	59	2	-1
8	5	-3	Liverpool	28	67	55	17	-12
9	10	+1	Fulham	2	52	52	2	0
10	9	-1	Brentford	12	59	49	-4	-10
11	12	+1	Chelsea	-9	44	44	-5	0
12	15	+3	Bournemouth	-34	39	44	-15	+5
13	16	+3	Nottingham	-30	38	43	-23	+5
14	11	-3	Crystal Palace	-9	45	42	-9	-3
15	13	-2	Wolves	-27	41	42	-22	+1
16	14	-2	West Ham	-13	40	36	-16	-4
17	18	+1	Leicester	-17	34	33	-11	-1
18	17	-1	Everton	-23	36	33	-23	-3
19	19	0	Leeds	-30	31	33	-29	+2
20	20	0	Southampton	-37	25	27	-30	+2

A total of 78 teams from 53 of the 55 UEFA member associations participated in the 2022–23 UEFA Champions League (the exception being Russia, who were banned from participating due to political reasons).

A total of 57 teams from 33 of the 55 UEFA member associations participated in the 2022–23 UEFA Europa League. The aim of the present study is to present the influence of set-pieces on contemporary professional football.

Methods

For the purpose of the study, we investigate the performance of the most prominent club teams in Europe during set plays and to propose effective goal-scoring methods after their execution, both in the competitive process and the place of set-pieces in the training process to the football experts.

We have recorded and analyzed all 125 Champions League matches and 141 Europa League matches. We divided the goals scored into categories - open play; set pieces (containing corners; free kicks, indirect free kicks) and penalty kicks.

The present study was carried out in the period 01.2023 to 06.2023. We observed 276 football matches from the two studied tournaments and extracted all goals scored from set pieces - 98. For the research, we used the software products: “Wyscout”, “Huld Studio and “Tacticalpad”. We used Excel to process the statistical indicators.

Parameters of the rules of football

Corner-kick - awarded when the ball crosses the goal line with its full volume (on the ground or in the air) after its last touch was made by a player of the defending team and no goal was scored (IFAB Rule 17).

Throw-in - awarded to the opposing team of the player who last made contact with the ball, after which it passed with its full volume on the sideline of the field of play (on the ground or in the air) (IFAB Rule 15).

Penalty kick – awarded if a player commits a game violation requiring a direct free kick to be taken in his own penalty area (IFAB Rule 14).

Free Kick – These are considered direct and indirect free kicks. They are awarded in favor of the opposing team of the competitor who committed the violation (IFAB Rule 13).

Results

On Figure 1, we observe at the ways to score all 372 goals in the strongest club tournament in the World. 74% (279 goals) of them came from open play situations, 17% (62 goals) from set-pieces and 9% (34 goals) from penalty kicks.

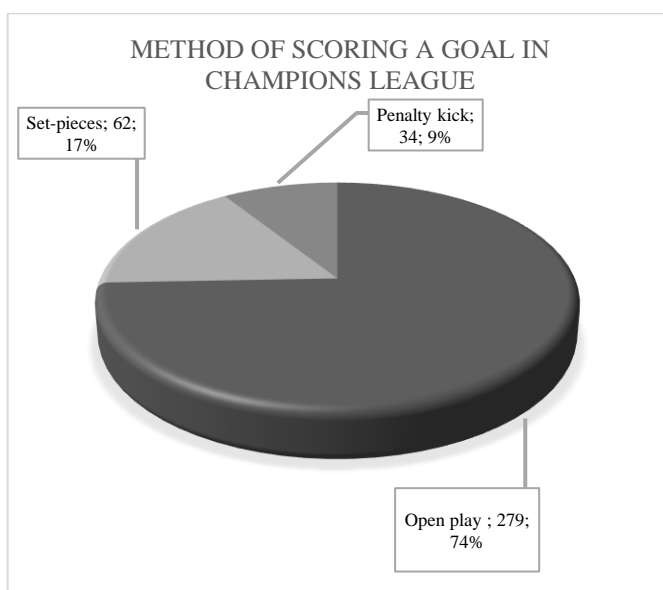


Figure 1. How goals are scored in the Champions League 2022/2023

From the point of view of the team performance in Figure 2, we notice that the teams with the highest percentage of goals scored after a static position also reached the latest stage of the competition, and accordingly finished in the last places in the preliminary groups of the tournament also have the weakest indicators of the studied components. The average success rate for set-pieces of the entire tournament is 16%. Manchester City won the award for Champions under review with a 22% success rate, which is 7 goals from 32 goals taken for the team. Josep Guardiola's side needs an average of 13 corners to score a goal in the opponent's goal. The tournament average needed to score a goal from a corner kick is 25 corner kicks for goal success. The tournament champions also create the most goalscoring chances from set pieces – 37, followed by Real Madrid with 31 and second-place finalist Inter with 30. Another interesting fact is that the Liverpool team dominates the competition in aerial duels with a 60% success rate. This allows the team from “Merseyside” to score 32% (6 goals) of their goals after set-pieces. But the most distinguished teams in the tournament according to these indicators are Juventus with 44% (4 goals) and Sevilla 50% (3 goals) according to their all scored goals in the Champions League.

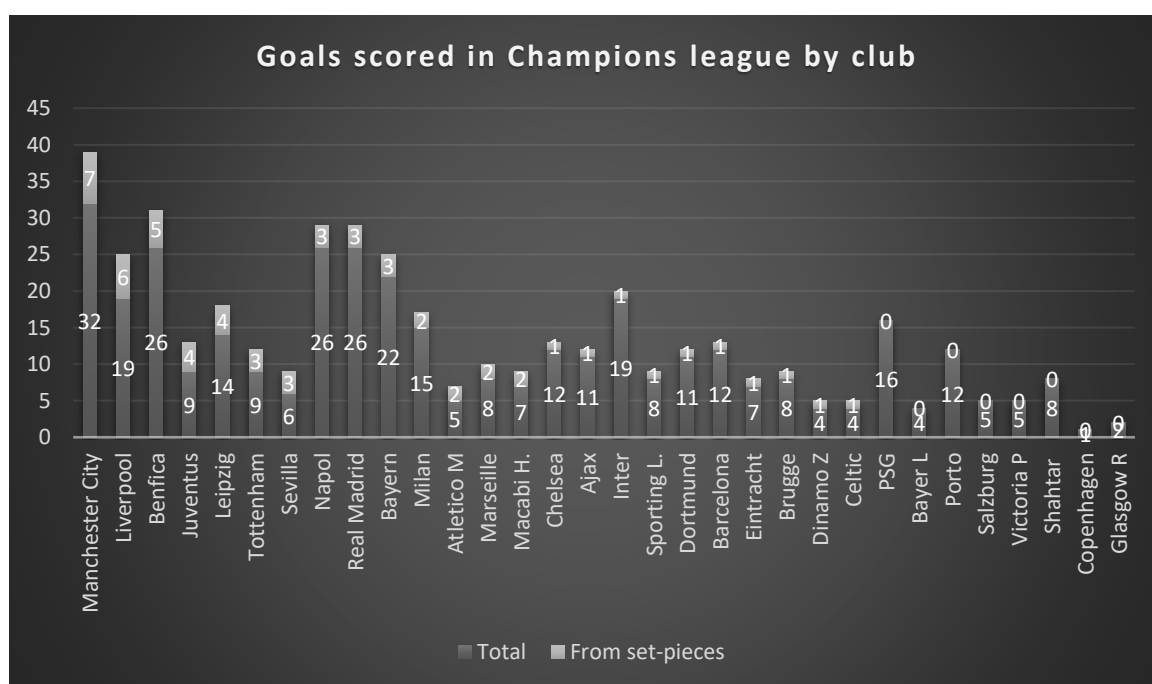


Figure 2. Number of goals scored by all teams in Champions League 22/23

Historically, in the last 4 years in the Champions League, we notice that the values are similar (Table 2), which in our opinion is an indicator of the constant maintenance of the high level of these aspects of the game in the tournament matches. This proves the constant drive of teams to score goals in this way.

Table 2. Method of scoring a goal in recent years in Champions League

Method of scoring a goal	2021-2022	2021-2020	2020-2019	2019-2018
Open play	281	257	301	266
Set-pieces	62	57	48	66
Penalty kick	38	55	37	34
Total	381	369	386	368

In Figure 3 we observe the method of scoring a goal in the second most powerful tournament on our continent - Europa League. The total number of goals scored in the competition was 381, with 73% (279 goals) from open play, 18% (67 goals) from set pieces, and 9% (35 goals) from penalties.

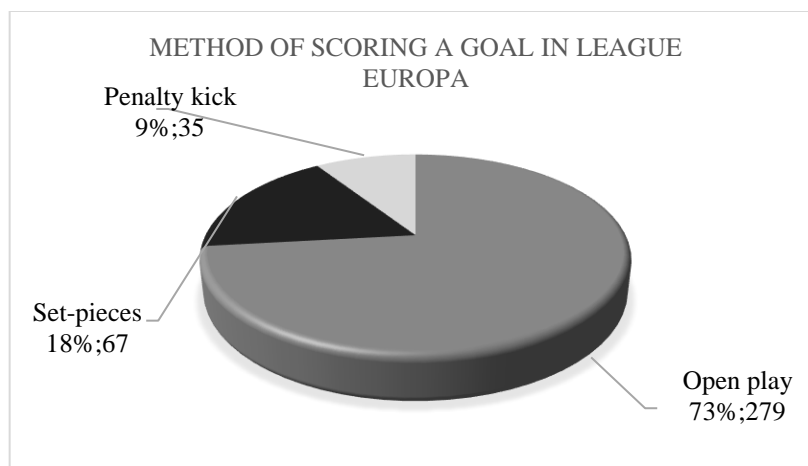


Figure 3. How goals are scored in the League Europa 2022/2023

When analyzing the goals scored in the Europa League (Figure 4), it can be clearly seen that the teams that continued more forward in the tournament achieved significant values of success in set-pieces. The winner of the tournament - Sevilla have scored 14 goals in the tournament 22% of which are after set-pieces and Fenerbahce managed to reach 14 goals, 6 (43%) of the researched criteria. Sporting Lisbon is the other team to take advantage of this way of scoring in 44% of successful shoots to the opponent's goal. It is important to note that the other finalist in the tournament, Roma, did not concede a single goal after a set-piece.

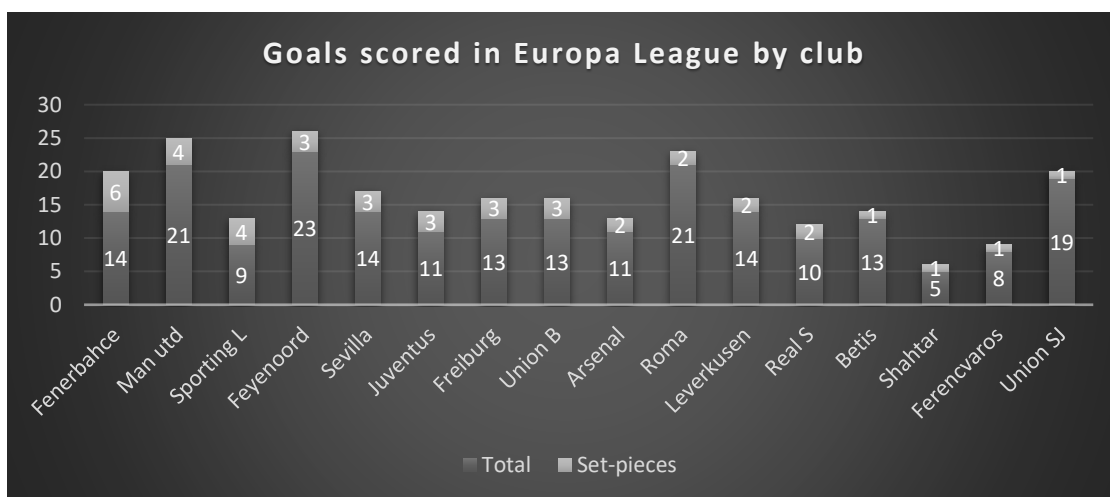


Figure 4. Number of goals scored by all teams in Europa League 22/23

Discussions

The UEFA European Club Tournaments provide an opportunity for the best-performing clubs from every country in Europe to measure their capabilities. In this highly competitive environment, coaches' tactical attitudes and their attacking strategies are determined by the outcome and stage of the tournament, therefore adapting their style of play to the needs of the match (Blommfield, Polman & O'Donoghue, 2005; James, Jones & Mellalieu, 2004; Lago & Martin, 2007). These strategies are also largely aimed at improving teams' ability to deal with set-pieces in both phases of the game. This is proven by the statistically high success rate of the winner of the Champions League Cup - Manchester City (Figure 5). Europa League winner Sevilla also shows the same accuracy rate in set-pieces. It is clearly seen that against the strongest team in the tournament of champions, the powerful countermeasure is precisely the corner kick.



Figure 5. All goals of the cup winner - Manchester City

After the facts thus stated, we want to propose several models of action in set-pieces in order to improve team actions in static situations (Figure 6-7).



Figure 6. Models for improvement in attack phase at set-pieces



Figure 7. Models for improvement defense phase at set-pieces

The use of a variety of actions in the execution of all types of set-pieces in attack leads to a change in the structure of the defending team in team actions, which can lead to disorganization and release free spaces, release a player or buy time in key areas in front of the goal. The creation of such moments brings with it prerequisites for more shots at the opponent's goal and more goals. In their scientific work, Stoilov & Gadzhev (2022), define set plays not only as an opportunity to score a goal but also as a way to retain possession of the ball depending on the outcome of the match.

Conclusions

The present study investigates set plays and their effectiveness on the sports results in the most important football tournaments in Europe. The importance of the high preparedness of the teams for playing set pieces is proven by the success rate of the champions in the Champions League and Europa League. More than the importance of goals scored in the attacking phase in these situations, protecting the goal defensively also contributes to a higher ranking in the competition.

With the most substantial influence from set play, we note the corner kicks off our study. They should be set as a major element of preparation in the teams' annual plan. Good preparation at this point in the game will lead to more goals scored and, accordingly, defensively, fewer conceded.

Our research results can help to focus more efforts on football coaches during set play preparation and achieving high sports results at the highest level of football in Europe.

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Informed Consent Statement

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