Major League Soccer:
technical analysis of performances in 2019

Drs Raffaele Poli, Loïc Ravenel and Roger Besson

1. Introduction

Within the framework of the renewal of the collaboration between the CIES Football Observatory and OptaPro, we have had access to the performance data of teams from the Major League Soccer (MLS) of the United States and Canada. The 52nd Monthly Report analyses the data from the 2019 regular season.

The first chapter focuses on the principle differences in the technical data of the game between the MLS and the five major European championships. The second compares the MLS teams from the point of view of their tactical choices regarding the passing game. The third chapter analyses the balance of power within the MLS in terms of shots taken and conceded during the last completed season.

2. Comparison MLS/big-5

The style of football played in the MLS differs from that of the five major European leagues in two principal aspects: the pressing on opponents and the aerial game. Regarding the former, the OptaPro data shows that the MLS players have more latitude to carry out passes in the opponents' third: 132 per match as opposed to an average of 124 for the big-5.

The high value measured in the English Premier League (131), where the intensity of play is substantial, reflects the competitive imbalance of the championship, with the presence of several dominant teams who are able to apply a strong territorial pressure on their opponents. Conversely, the particularly low level observed in the French Ligue 1 (109) points to a more equal balance of power between teams, as well as to a defensive discipline and prudence in attack that are not to be found in MLS.

The average number of duels per match recorded in MLS is lower than that observed in each of the five major European leagues. This result also reflects the lesser pressure applied by players on whoever has possession. Considering the indicators analysed, it is not surprising to note that the MLS is the competition among those studied where teams shoot most often at their opponents' goal.

A second technical aspect differentiating the MLS from the principle European leagues is the propensity for aerial duels. Partly due to the lesser pressure on the player who has possession, the MLS footballers privilege the passing game on the ground. This is reflected in a much lower number of aerial duels: -14% in comparison to the big-5 and -25% in comparison to the Premier League. The MLS teams also carry out fewer crosses than clubs in any of the five major European leagues.

Figure 1: total final third passes per match

MAJOR LEAGUE SOCCER (2019)	132.1
PREMIER LEAGUE (2018/19)	131.4
LIGA (2018/19)	121.6
SERIE A (2018/19)	121.1
BUNDESLIGA (2018/19)	116.3
LIGUE 1 (2018/19)	108.8
TOTAL	123.8

Figure 2 : duels per match

LIGUE 1 (2018/19)	57.3
PREMIER LEAGUE (2018/19)	56.6
BUNDESLIGA (2018/19)	56.5
LIGA (2018/19)	55.3
SERIE A (2018/19)	52.8
MAJOR LEAGUE SOCCER (2019)	51.1
TOTAL	54.4

Figure 3: goal kicks per match

MAJOR LEAGUE SOCCER (2019)	8.8
BUNDESLIGA (2018/19)	8.3
SERIE A (2018/19)	8.3
LIGA (2018/19)	8.2
LIGUE 1 (2018/19)	7.8
PREMIER LEAGUE (2018/19)	7.5
TOTAL	8.2

Figure 4: aerial duels per match

PREMIER LEAGUE (2018/19)	19.3
LIGA (2018/19)	19.0
BUNDESLIGA (2018/19)	18.0
LIGUE 1 (2018/19)	17.4
SERIE A (2018/19)	15.3
MAJOR LEAGUE SOCCER (2019)	14.4
TOTAL	16.9

Figure 5: crosses per match (without corners)

SERIE A (2018/19)	15.4
PREMIER LEAGUE (2018/19)	14.7
LIGA (2018/19)	14.6
BUNDESLIGA (2018/19)	13.9
LIGUE 1 (2018/19)	13.7
MAJOR LEAGUE SOCCER (2019)	12.1
TOTAL	13.8

3. Managing the ball

This chapter compares MLS teams from the point of view of the tactical choices regarding ball management. The analysis for the 2019 season allows us to differentiate teams according to the degree of importance given to possession. At one extreme, San Jose Earthquakes, New York City (subsidiary club of Manchester City) and Los Angeles FC followed a schema based on ball possession (>57% of possession). At the other, Colorado Rapids opted for a tactic of letting their opponents take possession.

The differences in terms of possession are amply reflected in the statistics for the percentage of long balls in comparison to the total number of passes carried out. Long balls are defined as passes over 32 meters (crosses or goalkeeper kicks excluded). At one extreme, almost a fifth of passes attempted by Colorado Rapids were aimed at players more than 32 meters away. At the other, this proportion was less than a tenth for Los Angeles FC.

By comparison, teams from the five major European leagues with the shortest passing game have even less recourse to long balls than those of the MLS. The lowest absolute figure for the 2019/20 season was measured for Paris St-Germain (5.9%). Lower percentages than at Los Angeles FC were also measured for Manchester City, Borussia Dortmund, Sassuolo, Naples and Barcelona.

Figure 6: % of ball possession (MLS 2019)

1	SAN JOSE EARTHQUAKES	58.2%
2	NEW YORK CITY FC	57.7%
3	LOS ANGELES FC	57.2%
4	ATLANTA UNITED	55.4%
5	TORONTO FC	54.1%
6	FC DALLAS	53.6%
7	PHILADELPHIA UNION	53.0%
8	SPORTING KANSAS CITY	52.6%
9	SEATTLE SOUNDERS FC	50.4%
10	LOS ANGELES GALAXY	50.2%
11	PORTLAND TIMBERS	50.1%
12	REAL SALT LAKE	49.7%
13	MONTRÉAL IMPACT	49.0%
14	COLUMBUS CREW	48.9%
15	CHICAGO FIRE	48.7%
16	ORLANDO CITY SC	47.7%
17	D.C. UNITED	47.6%
18	HOUSTON DYNAMO	46.9%
19	NEW YORK RED BULLS	46.5%
20	FC CINCINNATI	46.4%
21	NEW ENGLAND REVOLUTION	45.0%
22	VANCOUVER WHITECAPS	44.9%
23	MINNESOTA UNITED FC	44.4%
24	COLORADO RAPIDS	41.8%

Figure 7: % of long balls (MLS 2019)

1	COLORADO RAPIDS	17.4%
2	FC CINCINNATI	15.7%
3	NEW ENGLAND REVOLUTION	15.3%
.	NEW YORK RED BULLS	15.3%
5	REAL SALT LAKE	15.0%
6	VANCOUVER WHITECAPS	14.6%
7	CHICAGO FIRE	14.4%
8	MONTRÉAL IMPACT	14.0%
.	HOUSTON DYNAMO	14.0%
.	COLUMBUS CREW	14.0%
11	MINNESOTA UNITED FC	13.9%
12	PORTLAND TIMBERS	13.7%
13	ORLANDO CITY SC	13.5%
14	NEW YORK CITY FC	13.4%
15	D.C. UNITED	13.3%
16	SAN JOSE EARTHQUAKES	12.9%
17	LOS ANGELES GALAXY	12.6%
18	ATLANTA UNITED	12.5%
19	SEATTLE SOUNDERS FC	12.4%
.	SPORTING KANSAS CITY	12.4%
21	PHILADELPHIA UNION	11.7%
22	FC DALLAS	11.4%
23	TORONTO FC	11.1%
24	LOS ANGELES FC	8.3%

4. Balance of power

Independently of the tactical schema adopted in terms of managing the ball, every teams' objective is to score more goals than opponents. Creating opportunities for shots on goal while preventing opponents from doing so is best way of optimising the chances of success. From this point of view, the analysis of the ratio between the number of shots on target taken and conceded is particularly relevant.

Heading the 2019 rankings for the number of shots on goal are Conference West winners Los Angeles FC. The Californian team not only had the most shots on target (234, 6.6 per match), but it also conceded the least (129, 3.8 per match). Conversely, Vancouver White-caps conceded the most shots to opponents, which explains their last place in the rankings (0.64).

The comparison of the ratio of shots between the MLS and the major European leagues highlights the greater competitive balance that exists in the United States. The amplitude between the extreme values with regard to shots on target indeed varies between 1.89 (Ligue 1, PSG 2.46 to Amiens 0.55) and 1.37 (Bundesliga, Bayern 1.94 to Hertha 0.57) in the big-5, while it is only 1.17 in the MLS (Los Angeles FC 1.81 to Vancouver Whitecaps 0.64).

Figure 8: ratio of shots on target (MLS 2019)

		TAKEN / CONCEDED		RATIO
1	LOS ANGELES FC	234 / 129		1.81
2	NEW YORK CITY FC	197 / 130		1.52
3	ATLANTA UNITED	179 / 135		1.33
4	PHILADELPHIA UNION	172 / 137		1.26
5	SAN JOSE EARTHQUAKES	203 / 164		1.24
6	REAL SALT LAKE	158 / 132		1.20
7	FC DALLAS	166 / 140		1.19
8	CHICAGO FIRE	165 / 143		1.15
.	TORONTO FC	165 / 143		1.15
10	NEW YORK RED BULLS	158 / 143		1.10
11	PORTLAND TIMBERS	181 / 173		1.05
12	COLORADO RAPIDS	177 / 175		1.01
13	SPORTING KANSAS CITY	172 / 186		0.92
.	COLUMBUS CREW	127 / 138		0.92
15	HOUSTON DYNAMO	148 / 169		0.88
16	SEATTLE SOUNDERS FC	144 / 165		0.87
17	LOS ANGELES GALAXY	173 / 202		0.86
18	MINNESOTA UNITED FC	148 / 175		0.85
19	MONTRÉAL IMPACT	122 / 151		0.81
20	ORLANDO CITY SC	130 / 167		0.78
21	NEW ENGLAND REVOLUTION	143 / 194		0.74
22	FC CINCINNATI	121 / 168		0.72
.	D.C. UNITED	123 / 171		0.72
24	VANCOUVER WHITECAPS	135 / 211		0.64

By taking into account possession and the ratio of shots over a large number of competitions, it is possible to build a robust statistical model that can predict the number of points the teams should achieve with respect to their pitch production. The efficiency rankings below were established by comparing predicted scores with those actually obtained.

D.C. United was the most effective MLS team during the 2019 season. They obtained 0.51 points per match more than the volume of their game would have suggested (+53%). At the other end of the scale, we find San Jose Earthquakes (-0.41 points per match, -24%). These results can be explained for different reasons, the principal ones being the skill (or lack thereof) of key players, luck (or bad luck), as well as intelligence (on naivety), both individually (including at coaching level) and collectively.

Figure 9: efficiency rankings (MLS 2019)

		POINTS PER MATCH ACHIEVED / PROJECTED		GAP
1	D.C. UNITED	1.47 / 0.96		+0.51
2	SEATTLE SOUNDERS FC	1.65 / 1.23		+0.42
3	MINNESOTA UNITED FC	1.56 / 1.20		+0.36
4	LOS ANGELES GALAXY	1.50 / 1.20		+0.30
5	NEW ENGLAND REVOLUTION	1.32 / 1.07		+0.25
6	VANCOUVER WHITECAPS	1.00 / 0.76		+0.24
7	MONTRÉAL IMPACT	1.21 / 1.19		+0.02
8	NEW YORK CITY FC	1.88 / 1.86		+0.02
9	PORTLAND TIMBERS	1.44 / 1.45		-0.01
10	ORLANDO CITY SC	1.09 / 1.13		-0.04
11	REAL SALT LAKE	1.56 / 1.60		-0.04
12	ATLANTA UNITED	1.71 / 1.76		-0.05
13	PHILADELPHIA UNION	1.62 / 1.67		-0.05
14	LOS ANGELES FC	2.12 / 2.18		-0.06
15	TORONTO FC	1.47 / 1.54		-0.07
16	NEW YORK RED BULLS	1.41 / 1.50		-0.09
17	HOUSTON DYNAMO	1.18 / 1.31		-0.13
18	FC DALLAS	1.41 / 1.59		-0.18
.	COLORADO RAPIDS	1.24 / 1.42		-0.18
20	SPORTING KANSAS CITY	1.12 / 1.31		-0.19
21	COLUMBUS CREW	1.12 / 1.33		-0.21
22	FC CINCINNATI	0.71 / 1.03		-0.32
23	CHICAGO FIRE	1.24 / 1.60		-0.36
24	SAN JOSE EARTHQUAKES	1.29 / 1.71		-0.42

5. Conclusion

The Major League Soccer has undergone significant development over the past decade. The enthusiasm for soccer in the United States, with the organisation of the FIFA World Cup in focus, will allow the MLS to grow further, both economically and sportingly. From a sporting perspective, the principle change from the current situation will be an even higher intensity of play, with more duels and greater pressure on whoever has possession of the ball.

Beyond the economic aspects, the challenge for the MLS consists in its ability to attract increasingly better performing players from abroad, but also to develop more competitive footballers on site and retaining them for longer. While some of them will continue to join European clubs, the improvement of the training system will in any event strengthen the US national team, with very positive fallout for the MLS development and the popularity of soccer across the nation at large.