The State of Manchester United's Defence

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1 Introduction

In this report, we investigate the performance of Manchester United defenders during the 2017/2018 season by the use of four different defensive metrics in order to scout a new defender from a different league who will be able to complement the current defence.

2 Metrics

The following are the metrics used to evaluate the performances of the Manchester United defenders:

- Air duels won: An aerial duel is defined by Wyscout as a challenge between at least two players are competing to touch the ball at above elbow height. An air duel is considered won by the player who managed to touch the ball, regardless of where the ball ended up next.
- **Defensive ground duels won**: A defensive (ground) duel is defined by Wyscout as a player who is trying to take or dispossess a ball whilst an opposing player possessing the ball tries to pass them, where the ball is at below elbow height. The duel is considered won if the defending player dispossesses the attacker without committing a foul.
- **Interceptions**: The number of times a player intercepts the movement of the ball right after an opposing player has passed, shot or crossed it.
- **xT** defence: This metric is similar to interceptions, with the difference that each interception has a score in order to assess its importance. The score is the position-based expected threat (xT) at the location of the opposing player who possessed and passed the ball before the interception. Position-based xT is the probability that a goal will be scored given the location of a player possessing the ball on the field. A player's xT defence is therefore the sum of all the scores from their interceptions.

The following figures in Figure 1 show radars for each Manchester United defender. Each metric show the percentile ranking of a player when comparing it with all Premier League defenders during the 2017/2018 season, where the 100th percentile is the highest ranked and the 0th percentile is the lowest ranked. Note that when evaluating each metrics, they were adjusted per 90 minutes played for each player in order to accommodate that players have different playing times during a season. Moreover, since the amount of defensive actions a player makes is correlated with the amount of time the opposing team has possession of the ball, the metrics were normalized based on the possession of the opposing team.

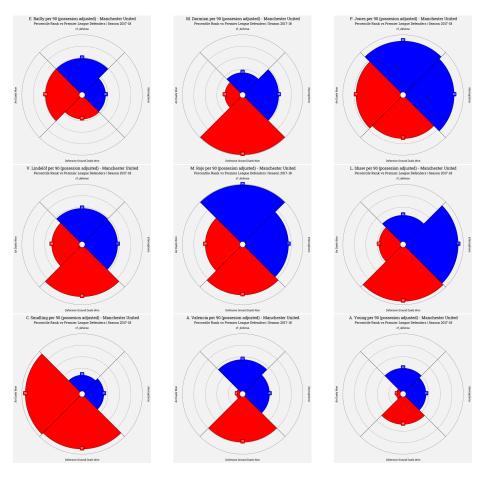


Figure 1: Radar charts of Manchester United defenders during the 2017/2018 season.

3 Analysis

Based on the charts in Figure 1, we see that many players are great at defensive ground duels, with 5/9 being above the 80th percentile. However, the players are more lacking on the other metrics, with only 1/9 being above the 80th percentile for air duels won and 2/9 being over the 80th percentile for xT defence and interceptions respectively. Since I believe that finding a player with good xT defence (and therefore better higher quality interceptions) who lacks in aerial duels is more forgiving for a defender than the opposite, I decided to scout a new player by using xT defence.

4 Scouting a new player

We scout a new player by looking at the top 10 performing Serie A defenders in terms of xT defence during the 2017/2018 season, which are shown in Table 1.

Player	xT defence
J. Vuković	0.749
V. Regini	0.728
B. Djimsiti	0.707
J. Andersen	0.695
N. Murru	0.692
F. Acerbi	0.679
A. Caracciolo	0.676
Ali Adnan	0.662
M. Škriniar	0.654
G. Chiellini	0.653

Table 1: Top Serie A defenders on xT defence.

Here, we see that Jagoš Vuković is the top performing Serie A defender on the metric. However, he is probably not a good pick for Manchester United since he is already 30 years old and will therefore probably decline in the coming years.

The second top player was Vasco Regini. However, according to Tranfermarkt, he only played 14 out of the 34 Serie A league games for his team Sampdoria, which suggests that he might not in the proper form to be a regular for Manchester United.

This leaves us with the third-best player in xT defence: Berat Djimsiti. He is a 25-year-old Albanian defender who played for Benevento during the 2017/2018 season on a loan from Atalanta. A radar chart of his performance is shown in Figure 2. According to Transfermarkt, he was valued at one million euros in June 2018. Although lacking in defensive ground duels, he excels at interceptions and xT defence while being pretty decent in winning air duels. Therefore, due to his high performance in Serie A whilst being a relatively young and cheap to

sign, my initial recommendation is that Manchester United should sign Berat Djimsiti.



Figure 2: Radar chart of Berat Djimsiti.