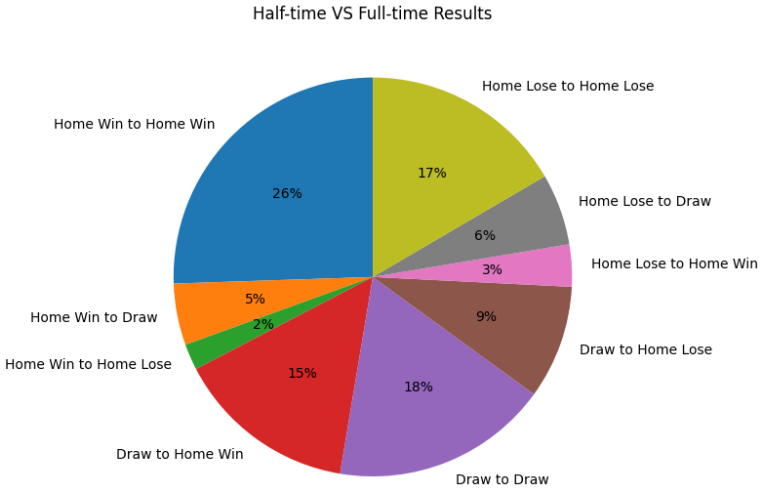
# Analysis of Premier League Season 2012/13

A dataset of all the matches that were played in the Barclays Premier League 2012/2013 season was analyzed. For each match the data included: team names, date (not for all the games though), result at half-time and full-time, goals for each team at half-time and full-time, referee name, shots for each team, fouls, yellow and red cards, and information regarding betting ratings. However, not all characteristics were analyzed. The most interesting findings were discussed below.

Analysis of match results and comparing between half-time result and full-time result of each match (the figure on the right) shows several facts:




1- If we sum up the percentages of unchanged results, the result would be approximately 61%. This shows that in many cases, the outcome of the match is decided in the first half.

2- Comparing between the percentages of "Home Win to Home Win" (26%), "Home Win to Draw" (5%) and "Home Win to Home Lose" (2%), it is clear that it rarely occurs that the home team draws after leading in the first half, and even more rarely to lose (which happened only in 8 matches out of 380, and most of them were against the top teams). This might be because of the support of their fans at their home ground.

3- However, looking carefully at the effect of the fans, one could notice that the home team chances to win the match after losing at half-time is very low (3%), which might lead to think that the fans' support is not effective enough to win a match from a losing position.

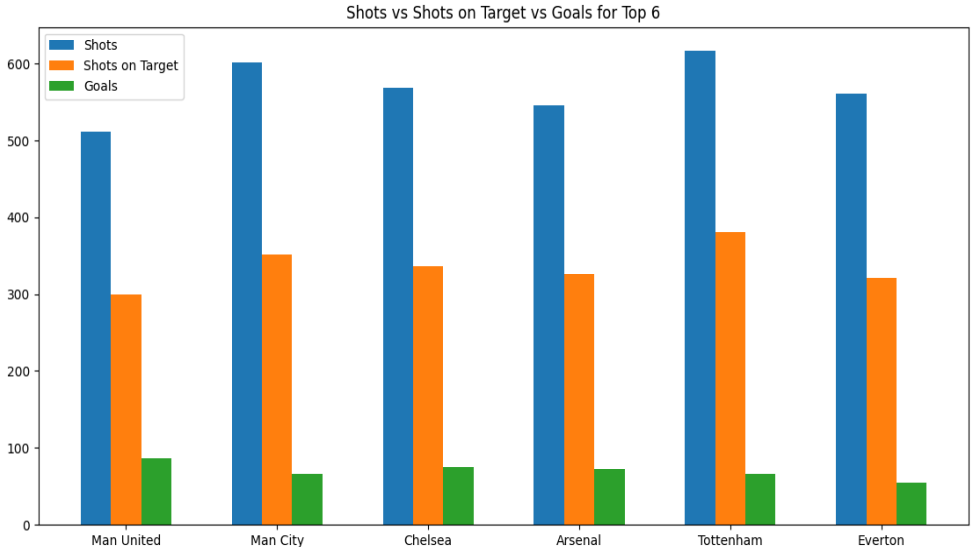
Average Betting Rates for Team Results

| | Win | Draw | Lose |
|---|---|---|---|
| Man United | 1.7 | 4.55 | 7.2 |
| Man City | 1.67 | 4.53 | 7.3 |
| Chelsea | 1.91 | 4.09 | 5.87 |
| Arsenal | 2.03 | 4.04 | 5.43 |
| Tottenham | 2.34 | 3.76 | 4.42 |
| Everton | 2.5 | 3.7 | 4.21 |
| Liverpool | 2.08 | 3.88 | 5.03 |
| West Brom | 3.81 | 3.64 | 2.57 |
| Swansea | 3.9 | 3.67 | 2.58 |
| West Ham | 4.04 | 3.65 | 2.45 |
| Norwich | 4.76 | 3.82 | 2.21 |
| Fulham | 3.85 | 3.66 | 2.64 |
| Stoke | 4.11 | 3.55 | 2.53 |
| Southampton | 4.5 | 3.85 | 2.42 |
| Aston Villa | 4.67 | 3.79 | 2.22 |
| Newcastle | 3.68 | 3.65 | 2.72 |
| Sunderland | 4.56 | 3.69 | 2.31 |
| Wigan | 4.27 | 3.74 | 2.36 |
| Reading | 5.5 | 4.05 | 1.96 |
| QPR | 4.85 | 3.9 | 2.31 |

The table on the left displays the average rates for betting on the result of games for each team (teams are ordered by their league ranking). Interestingly, the betting rates can give good insight about the league table.

By analyzing this table, one could figure out that both Manchester United and Manchester City were the favorites to win the league as they had the least betting rate for winning a Premier League match, although City was lower with a slight difference. Their rates for drawing or losing were also ranked highest rates in the table. Moreover, looking at the table from top to bottom, it is clear that the rates for winning and losing generally decreases and increases respectively all the way down to QPR, which has the greatest rate for winning.

However, betting rates don't say everything about the league table. For example, according to the betting rates, Liverpool would finish in the top four, but in reality, they finished seventh. The reason behind such flaw might be Liverpool's popularity; as their fans bet on their team to win, the rate gets decreased.




The chart above compares the number of shots, shots on target, and goals for the top 6 teams in the league.

According to the chart, Manchester United, the champions and the most-scoring team in the league with 86 goals, ranks the lowest in both shots and shots in target with 512 and 299 respectively among the top 6. It is clear that their conversion rate (highest in the league with 0.16 goals per shot) was the reason behind being the most-scoring team and eventually winning the league.

References:

[1] https://datahub.io/sports-data/english-premier-league#data-cli (dataset was obtained from this source).

[2] https://www.premierleague.com (League table was obtained from this source).