A study on Erling Haaland's performance in the 2022-2023 season of the Premiere League

Overview:

This report examines the performance metrics of Erling Haaland during his debut season with Manchester City in the English Premier League. The analysis focuses on goal distribution, assist patterns, and match outcomes to provide insights into Haaland's effectiveness and contribution to the team's success.

Erling Haaland, a 6'4" Norwegian striker, was 21 years old at the time and had already established a reputation as a world-renowned forward before joining Manchester City. Known for his exceptional scoring ability, Haaland's transition to the English champions was highly anticipated. This study delves into his performance metrics, highlighting his impact as a key player for Manchester City during the season who went on to win a historic treble (i.e., three trophies in the same season. The English premiere league, FA Cup and the UEFA Champions League). A feat previously achieved by the Rival neighboring team Manchester United.

Methodology:

Data was collected from match statistics, including goals scored, assist types, and match results from a website called understat. The analysis involved filtering and visualizing this data using various plots to identify patterns and trends. Key metrics include minute intervals of goals scored, types of assists, and distribution of goals against different teams. Python programming language was used to achieve the same with certain specific libraries like Pandas, NumPy, Matplotlib, etc.

Findings:

First, I Plotted a histogram that showcases the frequency of goals scored per minute interval shows peaks in the 30-39- and 80-89-minute ranges, indicating strong performance in these periods.
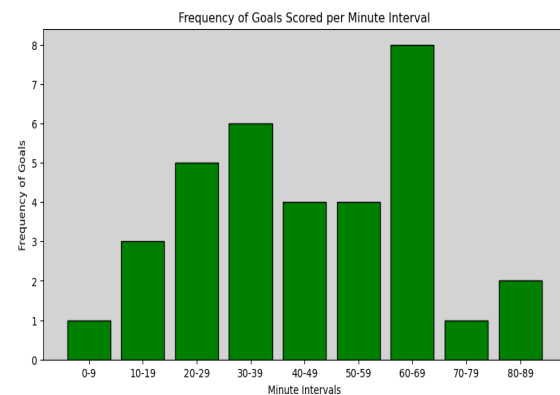

Fig 3.1

From Fig 3.1 we learn that Erling Haaland shows a pattern of scoring a higher frequency of goals between the 60th and 69th minute which is post the half time session in a standard game of European football. He also shows a noticed pattern of scoring at a higher rate during intervals 30-39 and 20-29 indicating that in certain games he scores during the early stages of a match putting the opposition in the back foot. This is a tremendous advantage that the manager and the team can leverage to win key moments during the season. We also notice a lesser impact during the start and ends of the game indicating that the player probably takes him time settling into a game to pick up on the

rhythm of his other players. A key stat that his teammates might find useful while playing in a match driving them to make him feel more comfortable and settle into the entire crux of a match.

I also plotted a donut chart showing the type of goal that is scored, i.e., from open play, a corner kick or from a penalty spot. For clarification, Open play indicates that the player scored a goal during the normal running's of a match while a penalty indicates a free kick at the goal from the penalty spot (which only the goalkeeper is allowed to defend) which is awarded to the attacking team after a foul within the penalty area by an opponent. The corner kick on the other hand is a place kick taken by the attacking side from a corner of the field after the ball has been sent over the end line outside the goal by a defender.

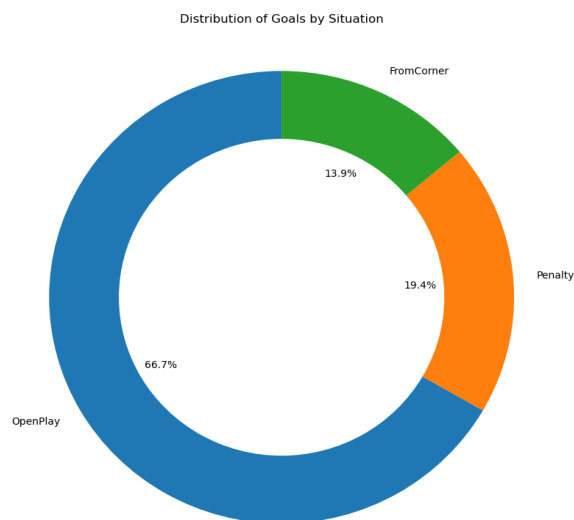Distribution of Goals by Situation

Fig 3.2

From the figure, we see that almost 67% of Haaland's goals are scored from open play which is good because it indicates that the player doesn't have to depend on Penalties or set pieces to convert his shots into goals. It also indicates that the player is reliable because in the game of football scoring from set pieces and penalties, albeit is strategic it

can be very volatile and unpredictable in terms of converting the situation into goals. It is also no surprise that the players goal tally from penalties and corner kicks is no slacking feat since it shows good statistics. His teammates could surely depend on his Goal striking expertise to convert any given situation into a goal.

A plot was also created showing the shots from the pitch that show the conversion statistics of his shots becoming goals. The numbers after creating the plot were quite convincing and well above par for any given striker let alone a world renowned one.
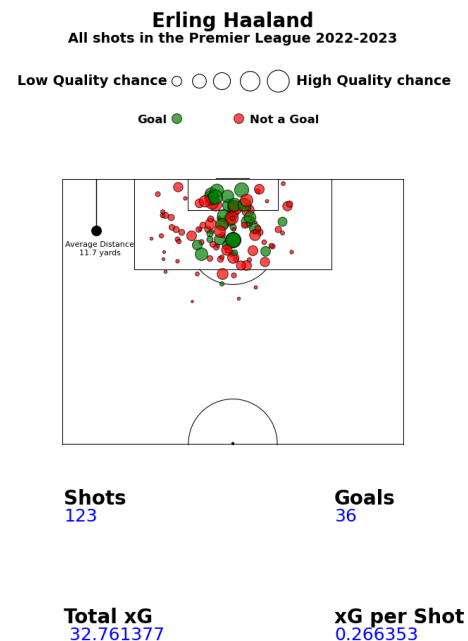

Fig 3.3

From the plot above we notice that most of the shots that the player takes is well within the D line with an average distance of 11.7 yards from the opposition goal indicating that the player prefers being an out an out striker relying on the expertise of his other teammates to feed the ball and later converting them into goals. This method of playing is almost forgotten given how

modern strikers play falling deep into the pitch trying to be more involved in general play and then driving up the field to score a goal. This might be misleading indicating that the player has an overbearing reliance on his teammate's performance during a match. With that being said, the player still holds high yielding numbers of shots and goals as shown in the figure with a total of 123 shots that season with 36 of them being goals which was at the time the highest by any player in the league which later led to him winning the Golden boot, which is the highest reward for any striker showing that they have scored the most goals by any player. When you compare the statistic of xG, you start put things into perspective because the player clearly outplayed is Expected goals for the season by almost 4 in total for the season.

Since we observed that the player was an out an out striker who relied on the final pass of his teammates, we needed to dive deeper into what passes were being converted into a goal. Hence, we plotted a pie chart showing the percentage of the type of passes prior to scoring a goal.
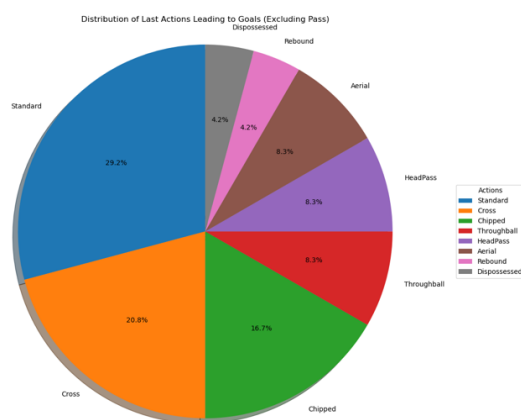

Fig 3.4:

From the plot, we learn that most of his goals come from standard passes that is the most common form of an assist that leads to a goal. On the surface it might seem like not so exciting statistic, but we are then closely

followed by a second highest percentage from the crosses category. A cross is a pass from a wide area of the pitch to the penalty box to create scoring opportunities for attacking players. This adds up since the striker in question is tall and of good physique compared to other players hence the high percentage of goals from crosses.

Notifying these numbers, I also took the extra step to determine the specific teammates who were responsible for the assist to Erling Haaland that led to goals. Knowing this we can determine who the player might benefit from having alongside him. For this we plotted another pie chart indicating the teammates with the highest percentage of assists feeding the hungry striker for his next goal.
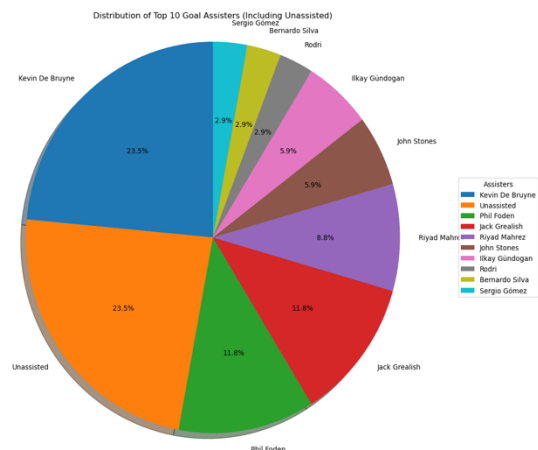

Fig 3.5

From the plot we learnt that most of the assists were "Unassisted" which indicates that the player himself created chances to score a goal. This statistic is key since it shows that the striker isn't entirely dependent on his teammates for a goal despite being an out an out striker. But when you look closely, the numbers also suggest a close second with Kevin De Bruyne's percentage of assists. Followed with Phil Foden and Jack Grealish in second and third place. This makes sense because all of them were attackers and were heavily focused on helping the team score

goals. Since they play higher up the pitch alongside the Norwegian striker it makes sense why these numbers are wrong. This still doesn't show how good of a striker Erling Haaland is because he has a good percentage of assists from players like John Stones who is primarily a defender showing how prolific the striker is at converting his chances.

Conclusion:

In conclusion, the analysis of Erling Haaland's performance during his debut season with Manchester City reveals a remarkable contribution to the team's success. The data highlights his proficiency in scoring crucial goals, particularly in key moments of the match, and underscores his effective partnerships with top assisters. The distribution of goals across different minute intervals and against various teams showcases his adaptability and consistency. Overall, Haaland's impact as a prolific striker is evident, reinforcing his reputation as a world-class player and a vital asset to Manchester City's attacking prowess. Future strategies should continue to leverage his strengths while exploring opportunities for further enhancement in away matches.