

UNDERSTANDING SUCCESSFUL **SOCCKER** **PERFORMANCES**

DEAN, JENNIE, JOSE, AND LOIC



DATA OVERVIEW

- 2 datasets: Matches and EloRatings
- Match history spans from 2000–2024
- **226k matches**
- **900 teams** from all major leagues worldwide
- Game statistics (Shots, Fouls, Corners, Yellow Cards)



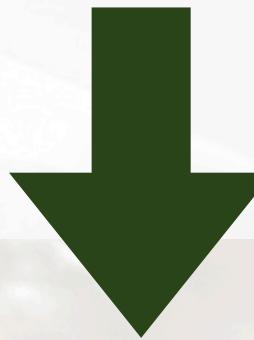
RESEARCH QUESTION



How is success measured and what factors affect a team's success?

Audience: Coaches, analysts who want to learn about what makes a team successful beyond just winning trophies

HOW IS SUCCESS MEASURED?



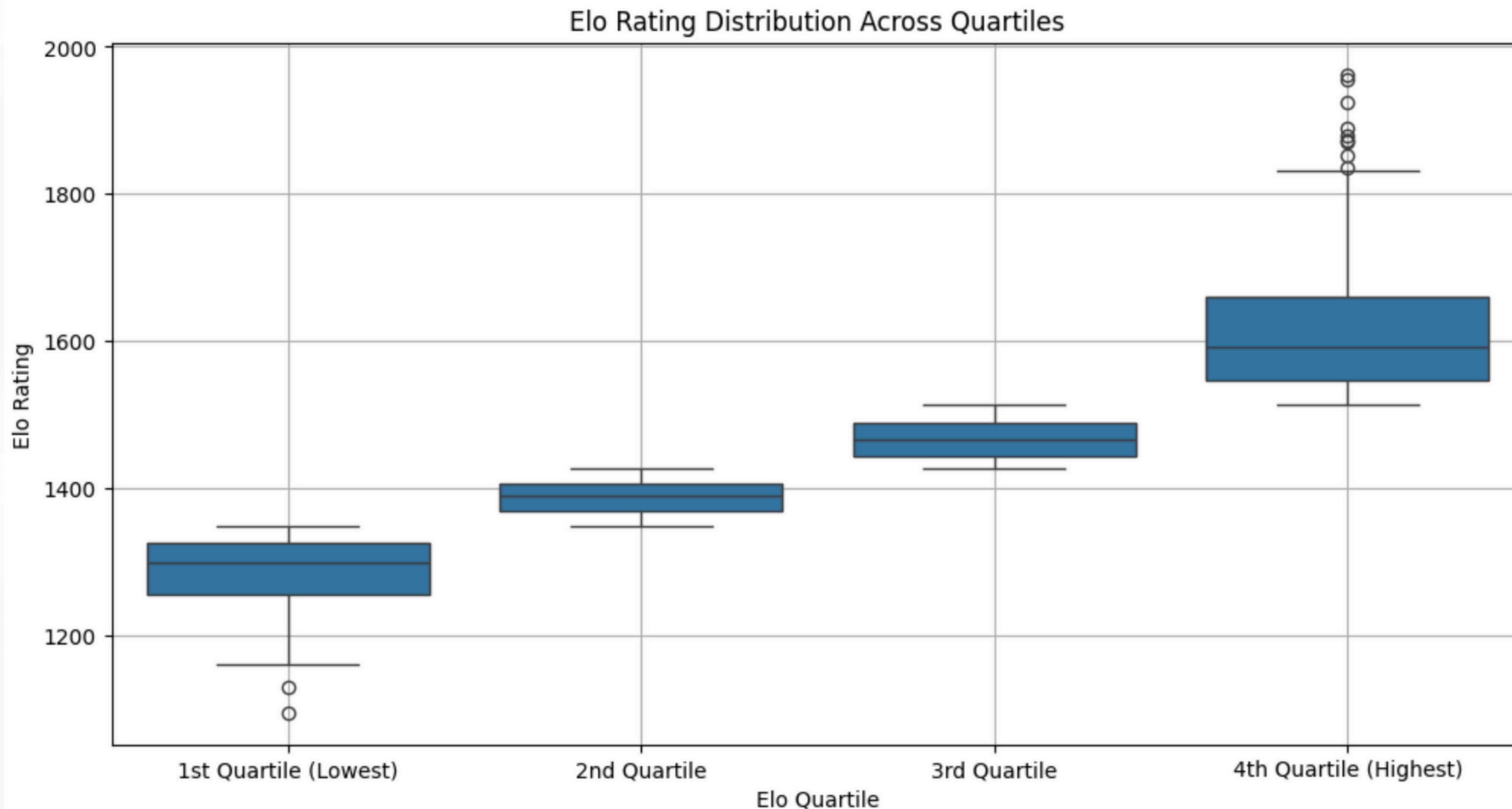
ELO
RATINGS



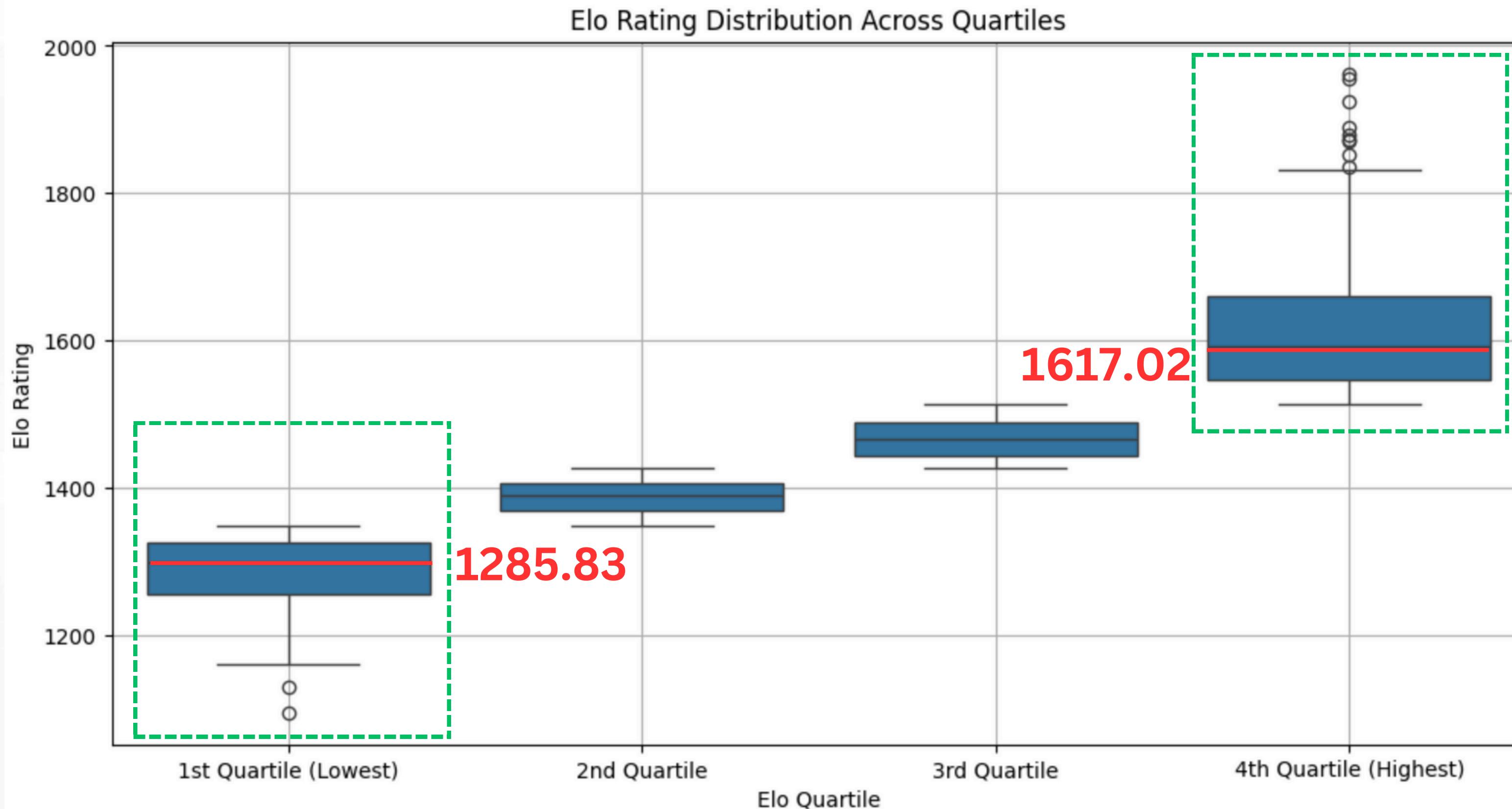
- Indicates a team's skill level
- Based on:
 - Match performance
 - Strength of opponents
 - Consistency



HOW ARE THE TEAMS CATEGORIZED? BASED ON ELO RATINGS



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HOW ARE THE TEAMS CATEGORIZED?

BASED ON ELO RATINGS

GOOD
TEAMS

TOP 25%
(4th quartile)

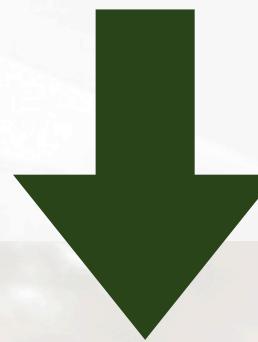
- 224 teams
- 130k games (*550 games each team*)
- Avg elo rating: 1300

BAD
TEAMS

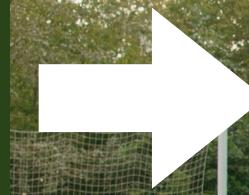
LOWEST 25%
(1st quartile)

- 224 teams
- 115k games (*500 games each team*)
- Avg elo rating: 1600 (*9 teams above 2000*)

HOW IS SUCCESS MEASURED?



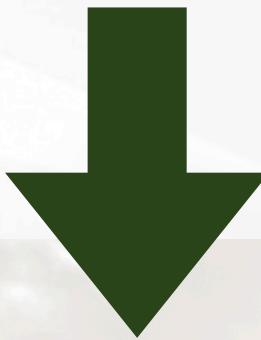
ELO
RATINGS



What factor affect Elo ratings?



HOW IS SUCCESS MEASURED?



ELO
RATINGS



What factor affect Elo ratings?

→ POINTS MEASURING

- A system used to assign points to teams in a league or tournament based on match results
 - 3 game form
 - 5 game form

WIN = 3 POINTS, DRAW = 1 POINTS, LOSS = 0 POINTS

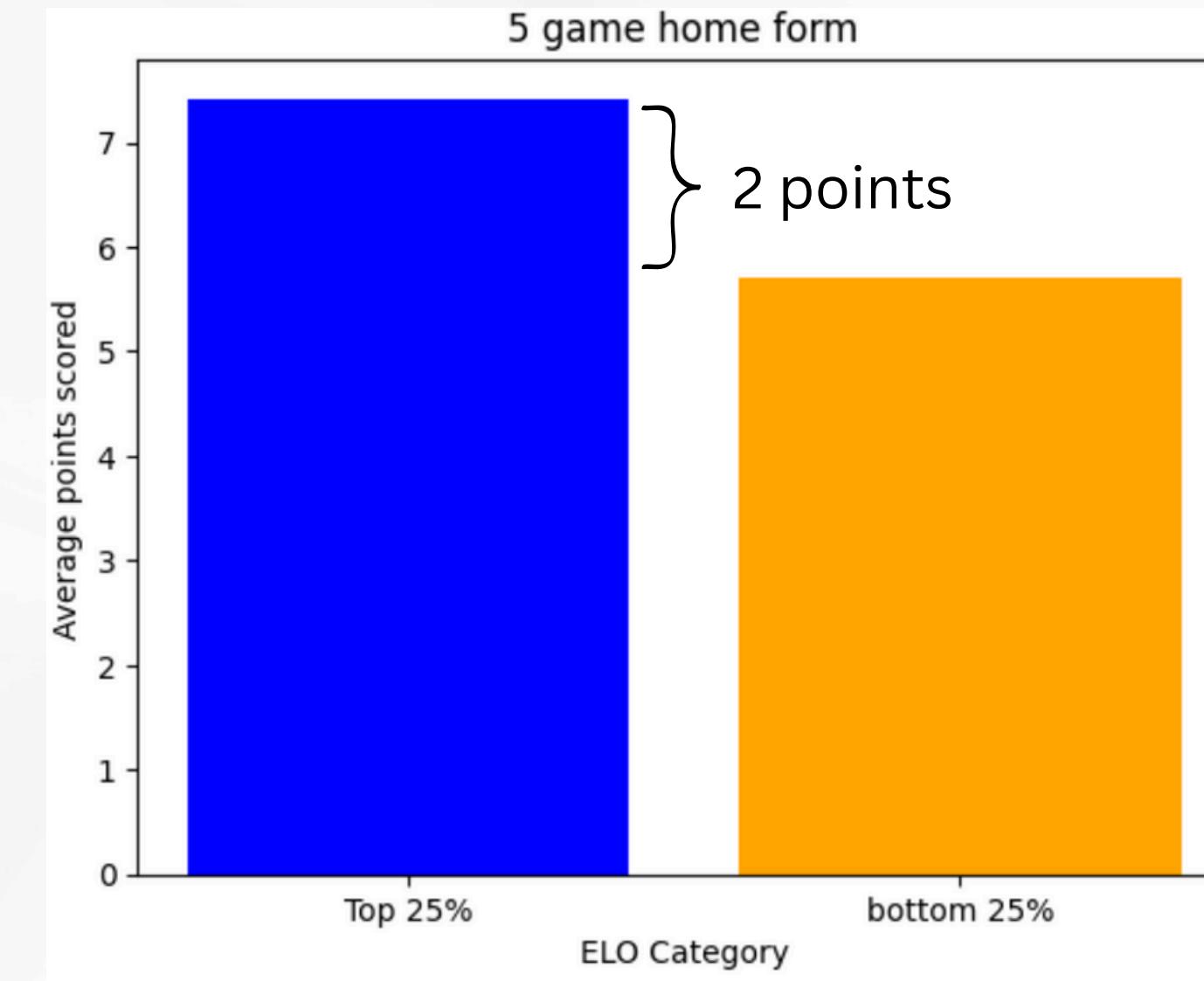
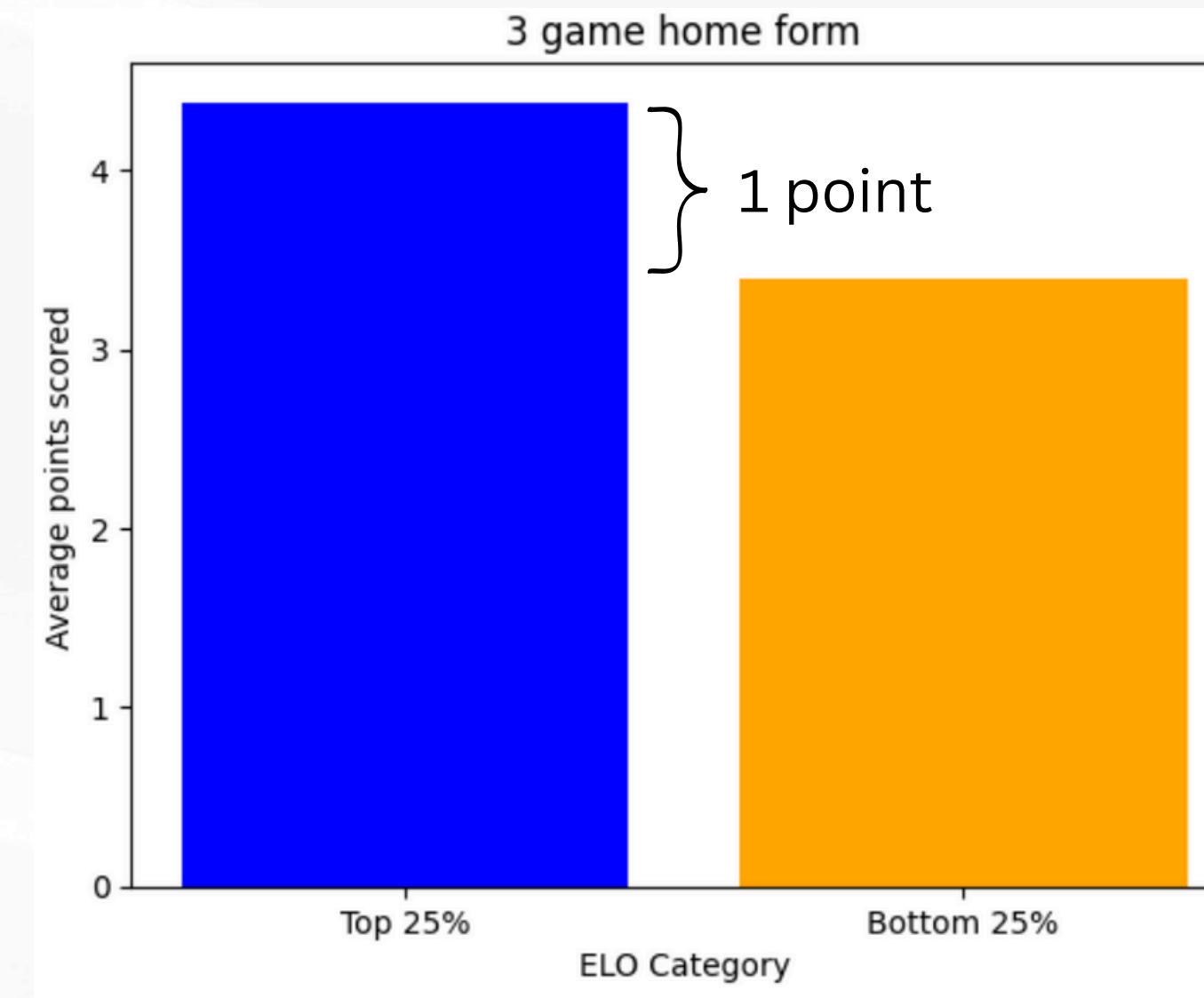
WHAT IS GAME FORM?

- Tracks a teams performance over the last 3 games
- Game form is calculated by **adding up points from the last 3 games.**
- Ex. $(3+1+0) = 4$ points
- After each match, the oldest result is removed, and the latest result is added

3 GAME FORM

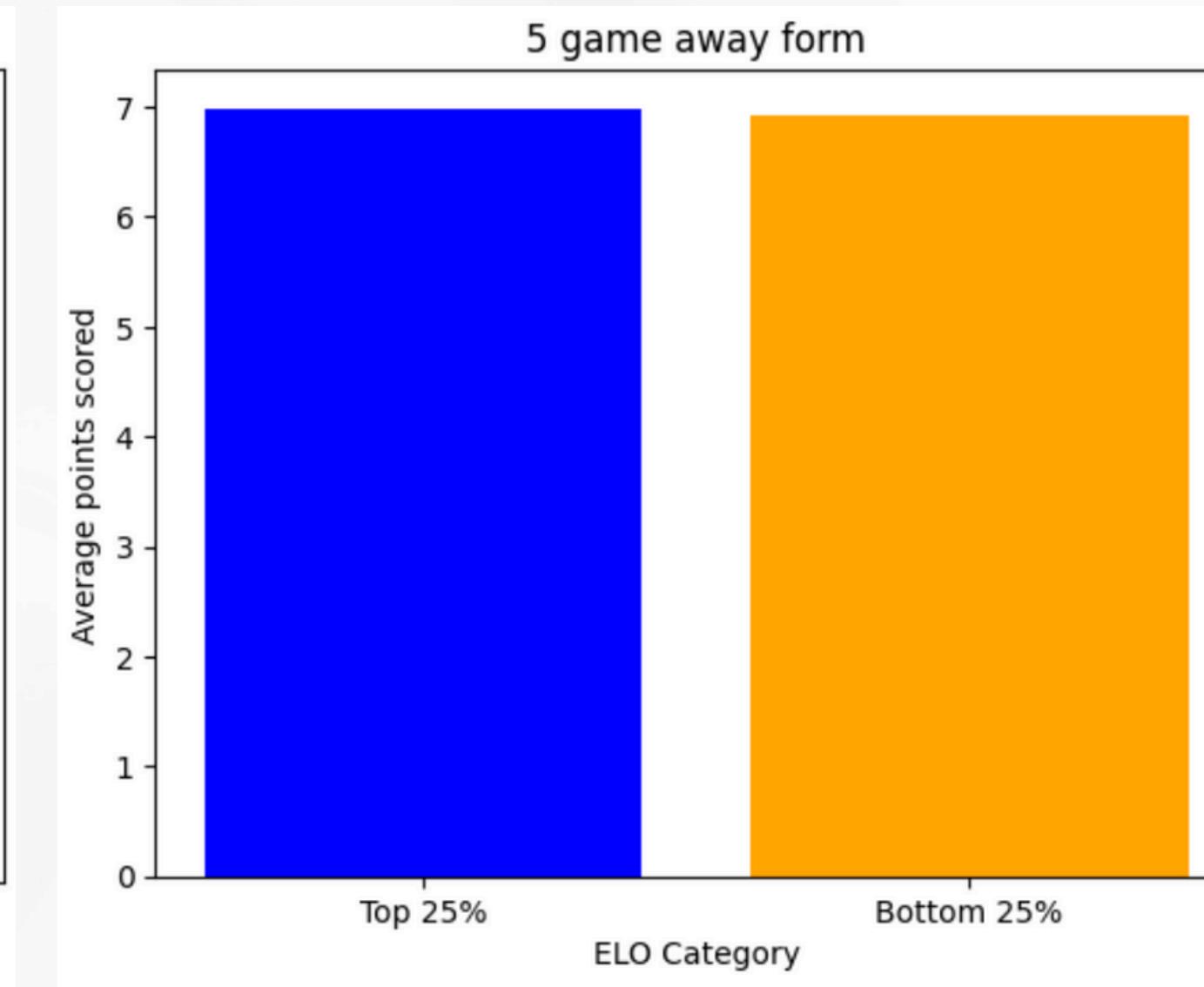
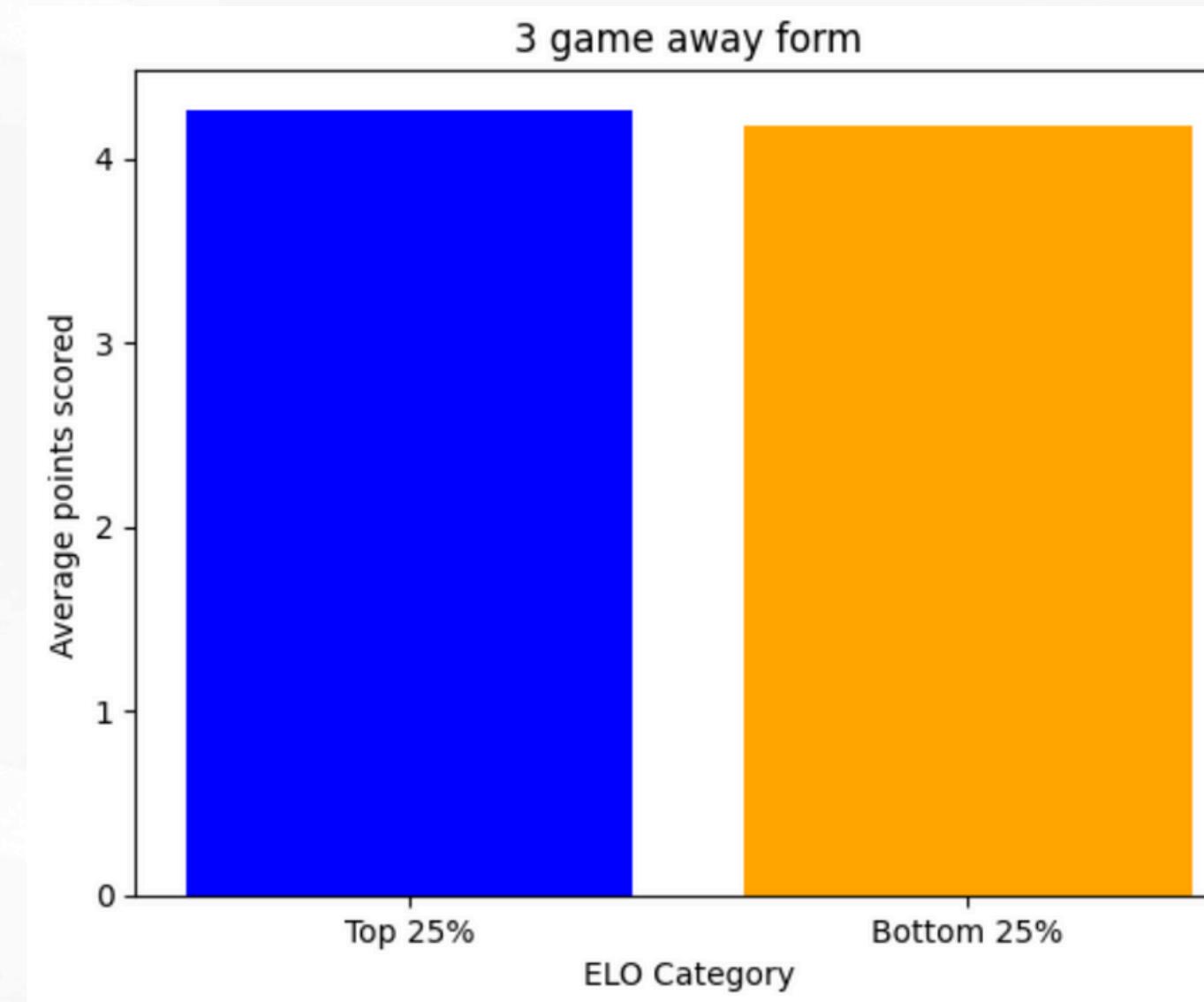
Game 1	Win	3 points
Game 2	Draw	1 point
Game 3	Loss	0 point

HOME GAME PERFORMANCE



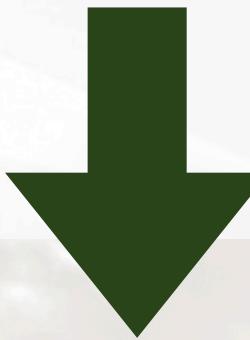
- Good teams perform well at home to keep the **winning streak** alive
- Bottom 25% teams **lack the consistency** to dig themselves out of hole if they have a bad game

AWAY GAME PERFORMANCE



- Much **harder to win on the road** since the conditions are against you
- Top 25% teams play more cautiously away, adjusting their strategy to maintain control

WHAT FACTORS AFFECT ELO RATINGS?



POINTS



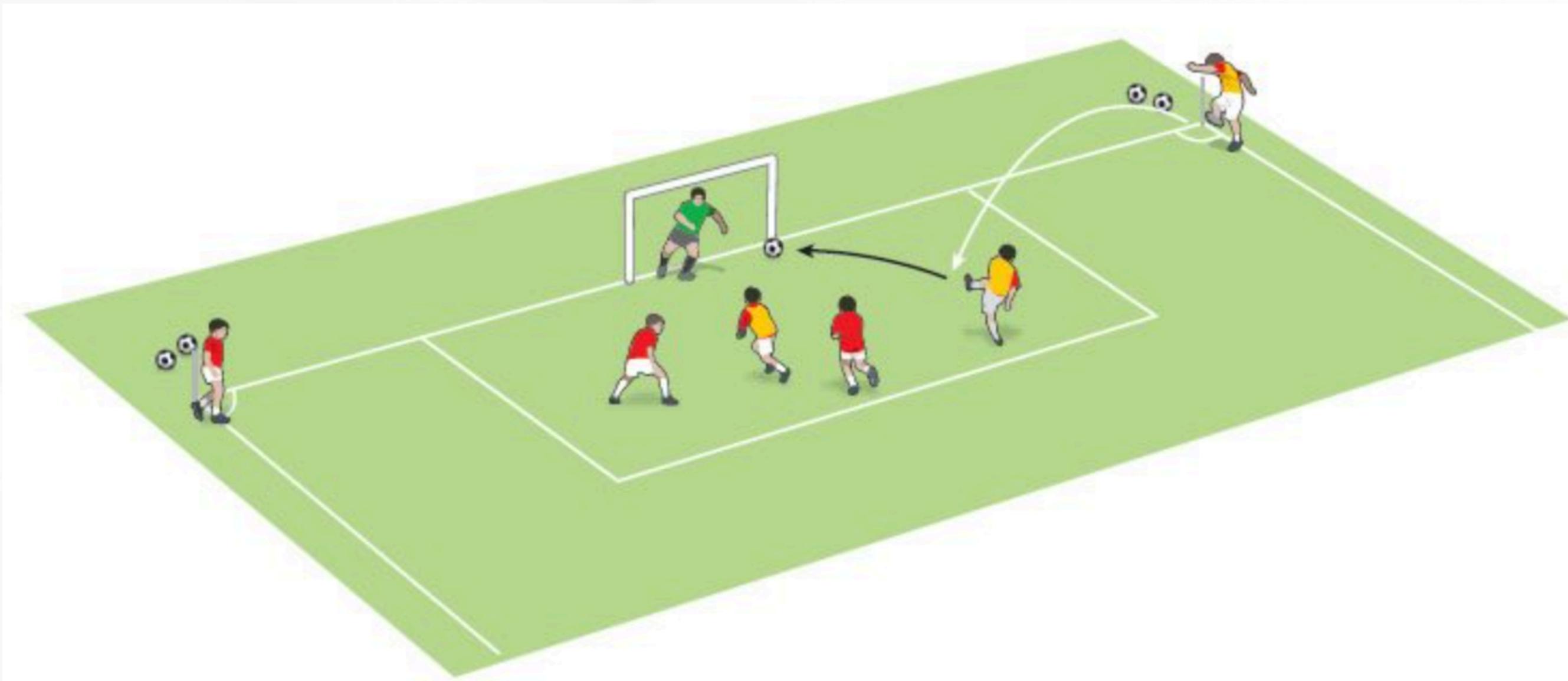
What factor affect a team performance?

- SHOT DIFFERENCE
- CORNER DIFFERENCE
- TEAM DISCIPLINE

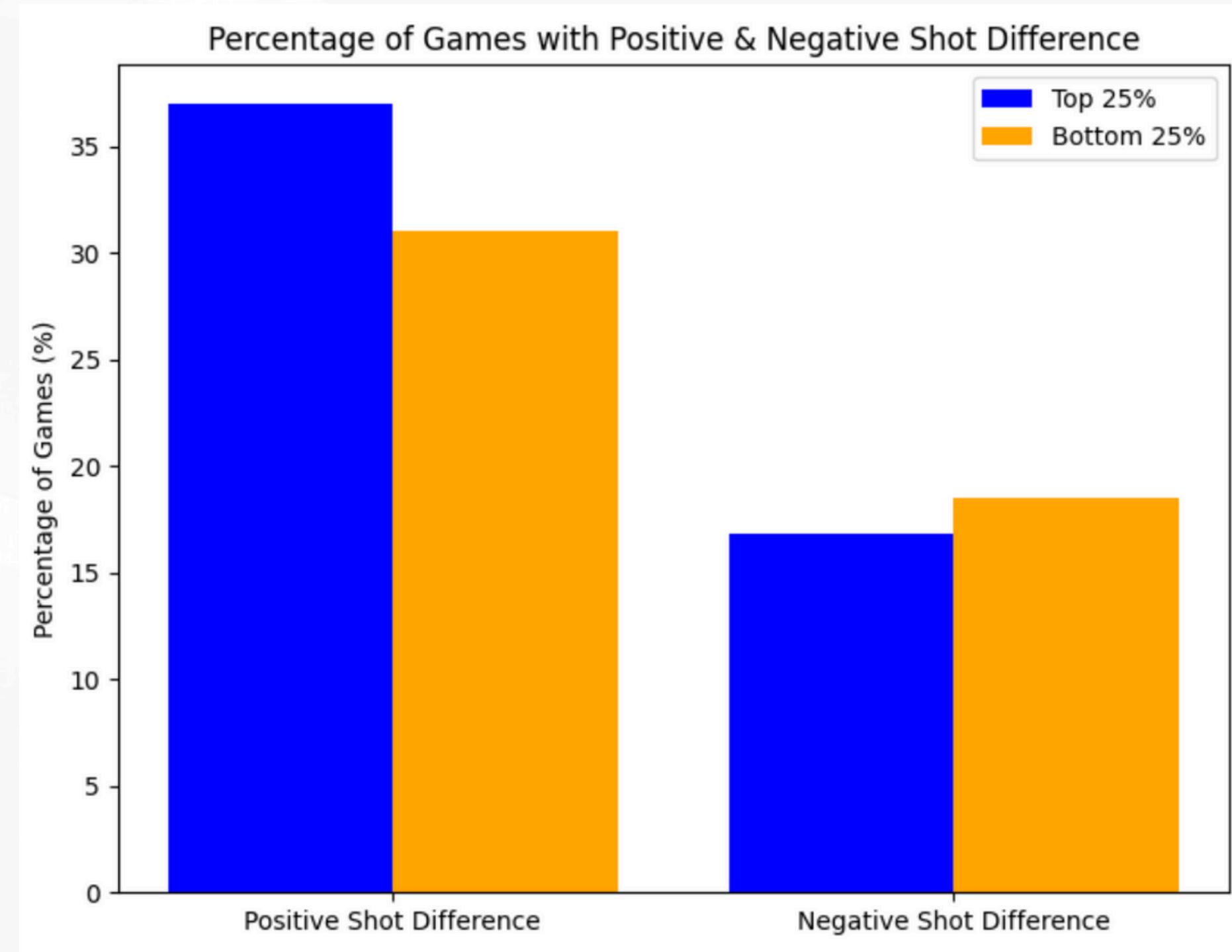
SHOT DIFFERENCE

Measures which team has taken more shots in the game.

i.e. Shot Difference = Shots taken by Team A - Shots taken by Team B



SHOT DIFFERENCE

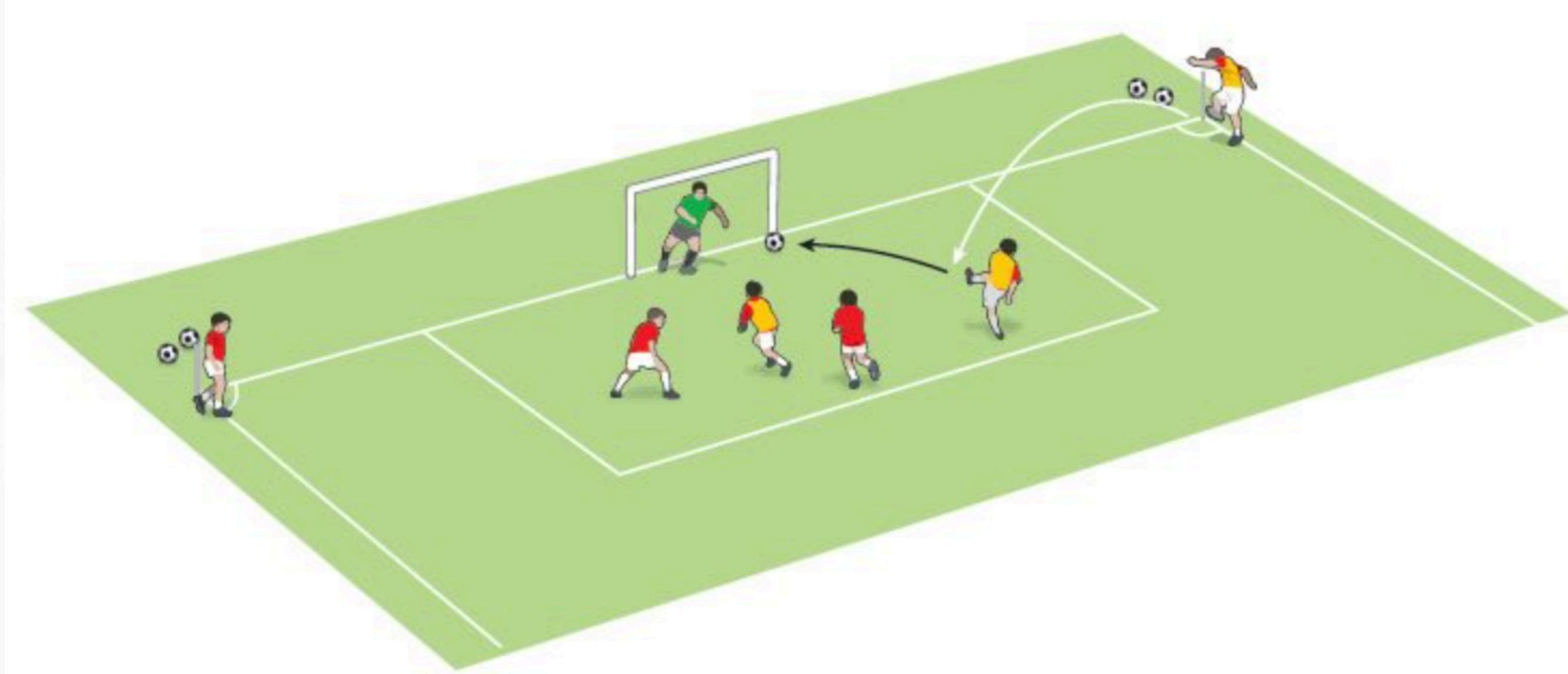


- **Top 25% ELO teams** control shot difference more often but **don't rely on it as much for success**. They can still perform well even when outshot.
- **Bottom 25% ELO teams** are less consistent in outshooting opponents and **rely more on shot advantages** to maintain good form.

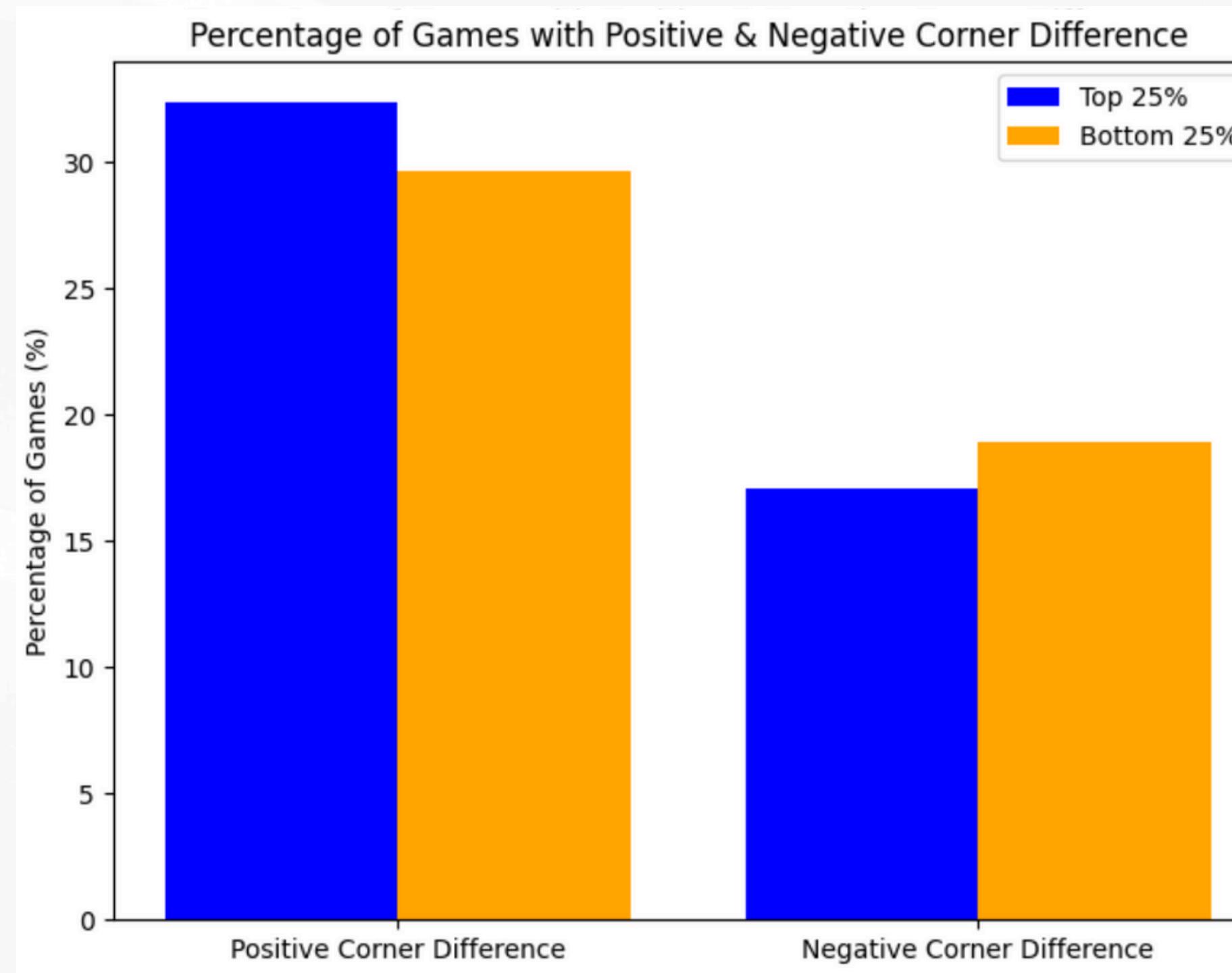
CORNER DIFFERENCE

Measures which team has taken more corners in the game

i.e. Corner Difference = Corners taken by team A - Corners taken by team B



CORNER DIFFERENCE

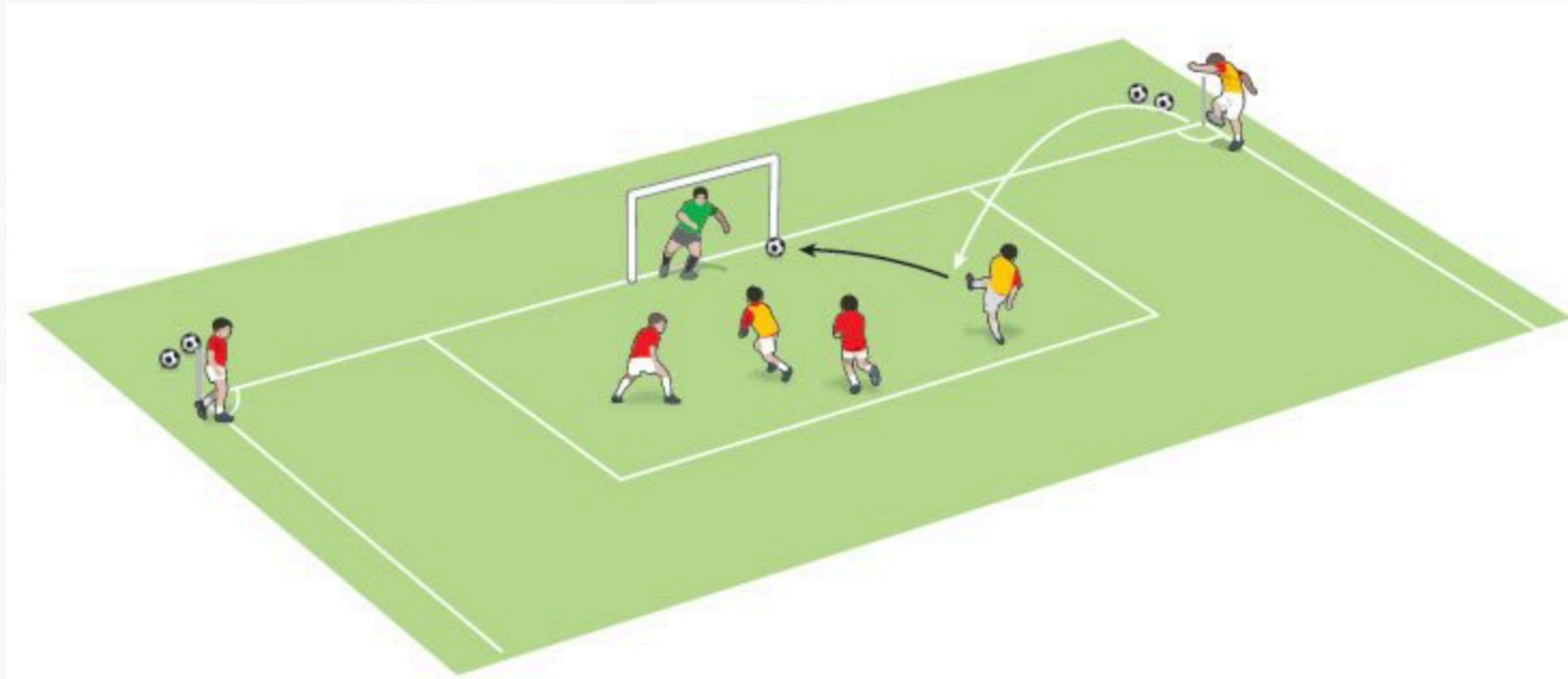


- **Top 25% ELO teams** earn more corners in games but **don't heavily depend** on them to maintain strong performances.
- **Bottom 25% ELO teams** struggle to win as many corners and tend to benefit more when they do. Gaining a corner advantage **plays a bigger role** in their overall performance.

TEAM DISCIPLINE

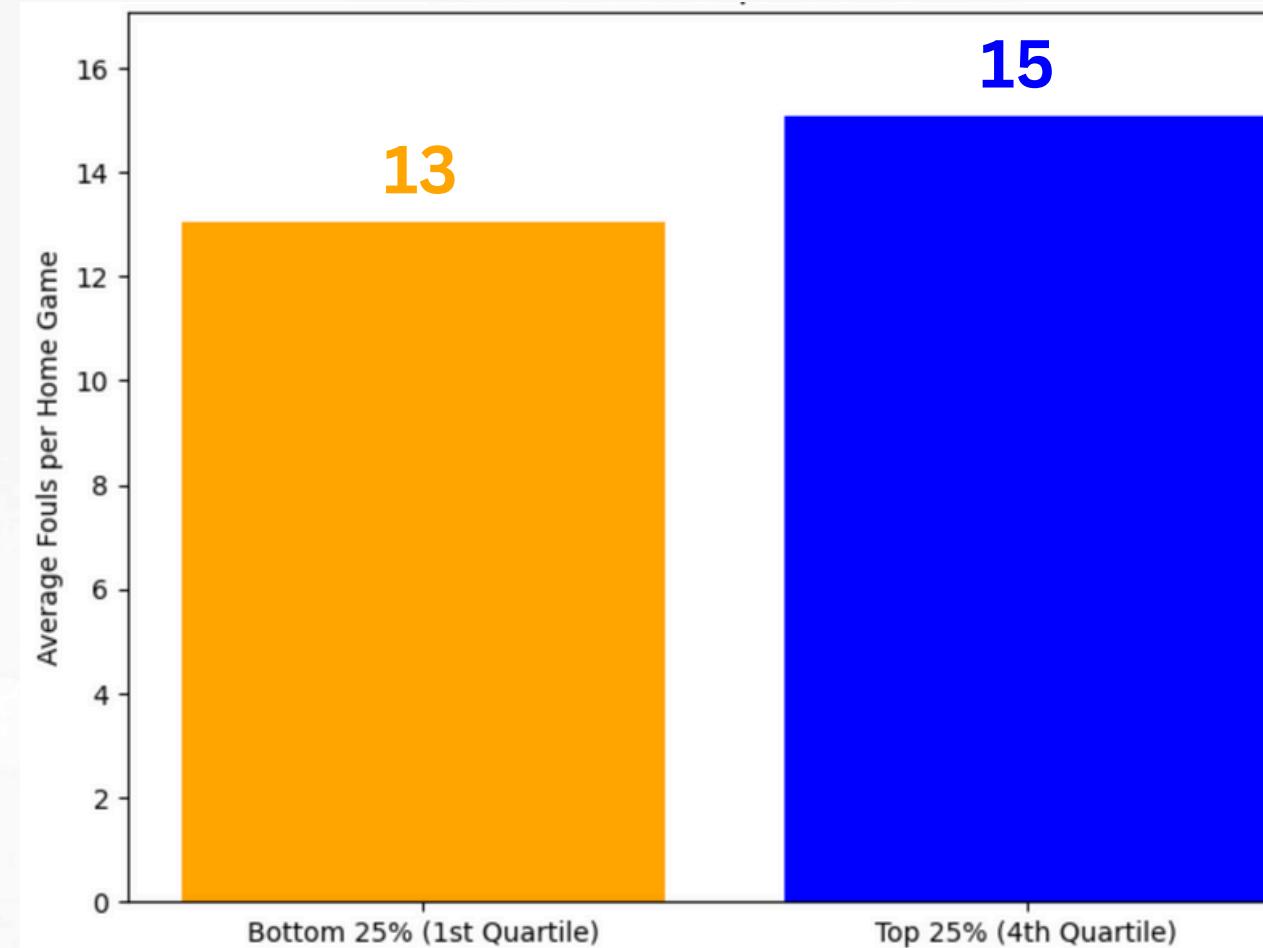
How discipline and performance dynamics across teams

- Fouls frequency
- Yellow cards

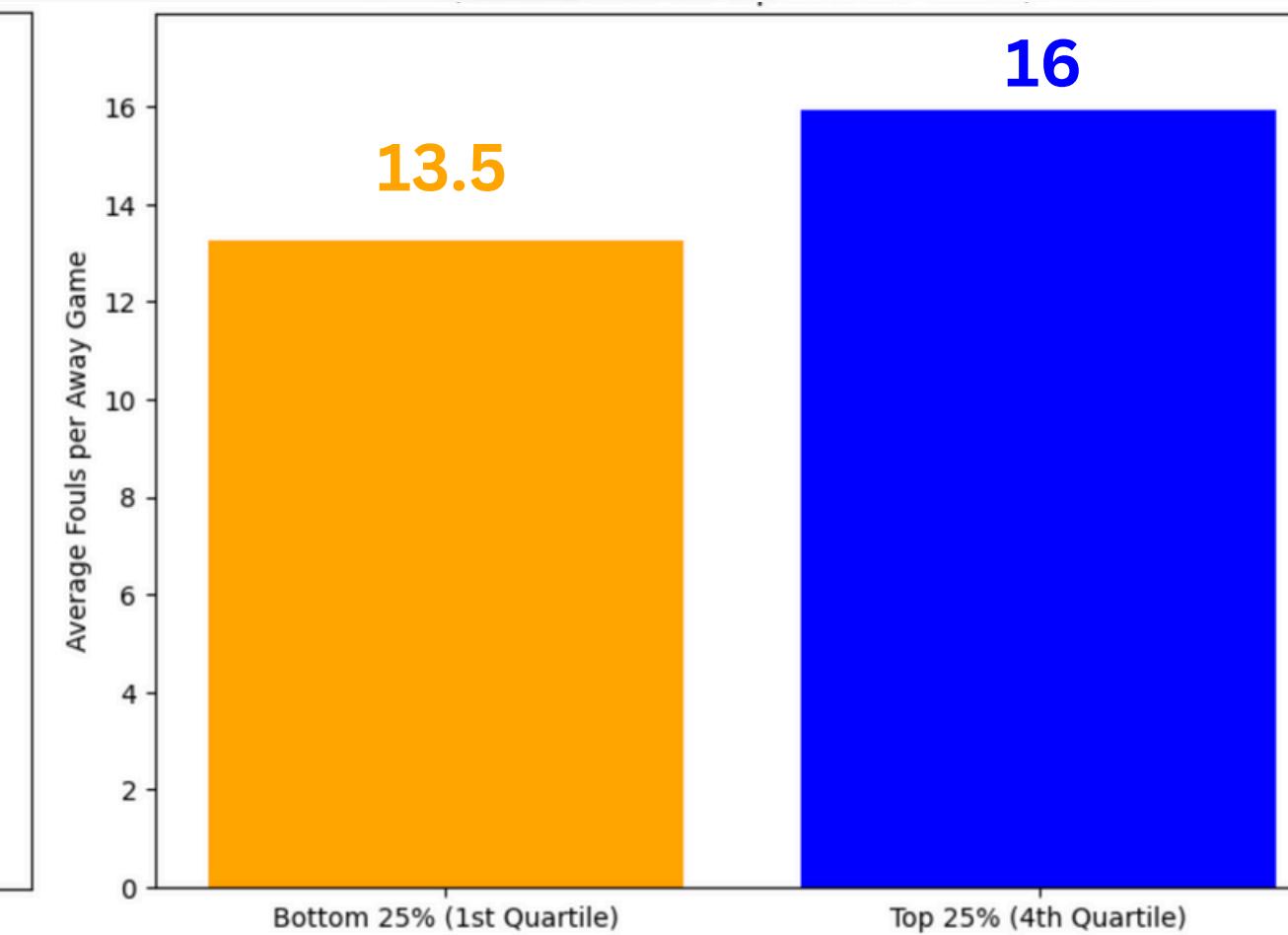


FOULS FREQUENCY

HOME GAME



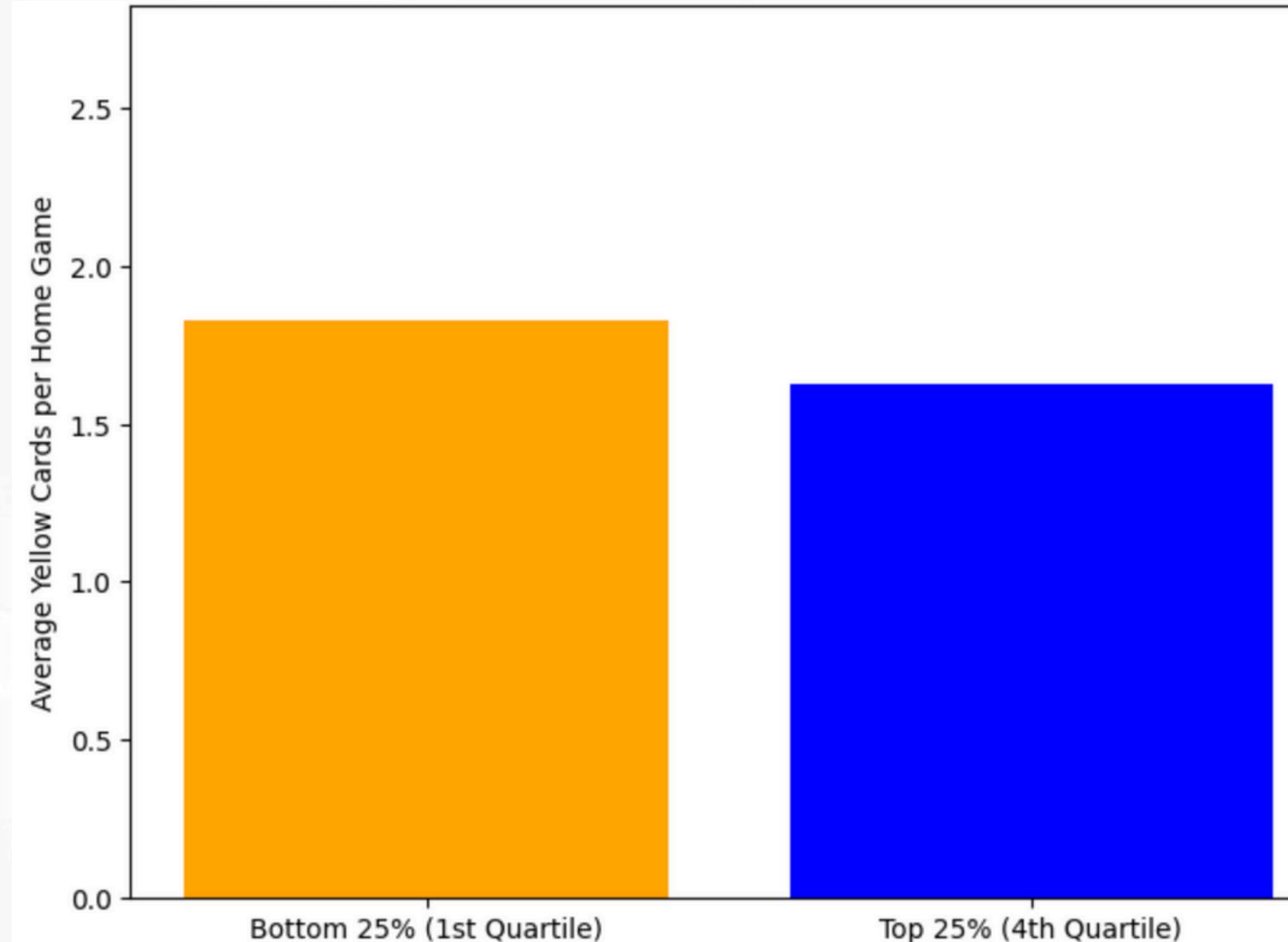
AWAY GAME



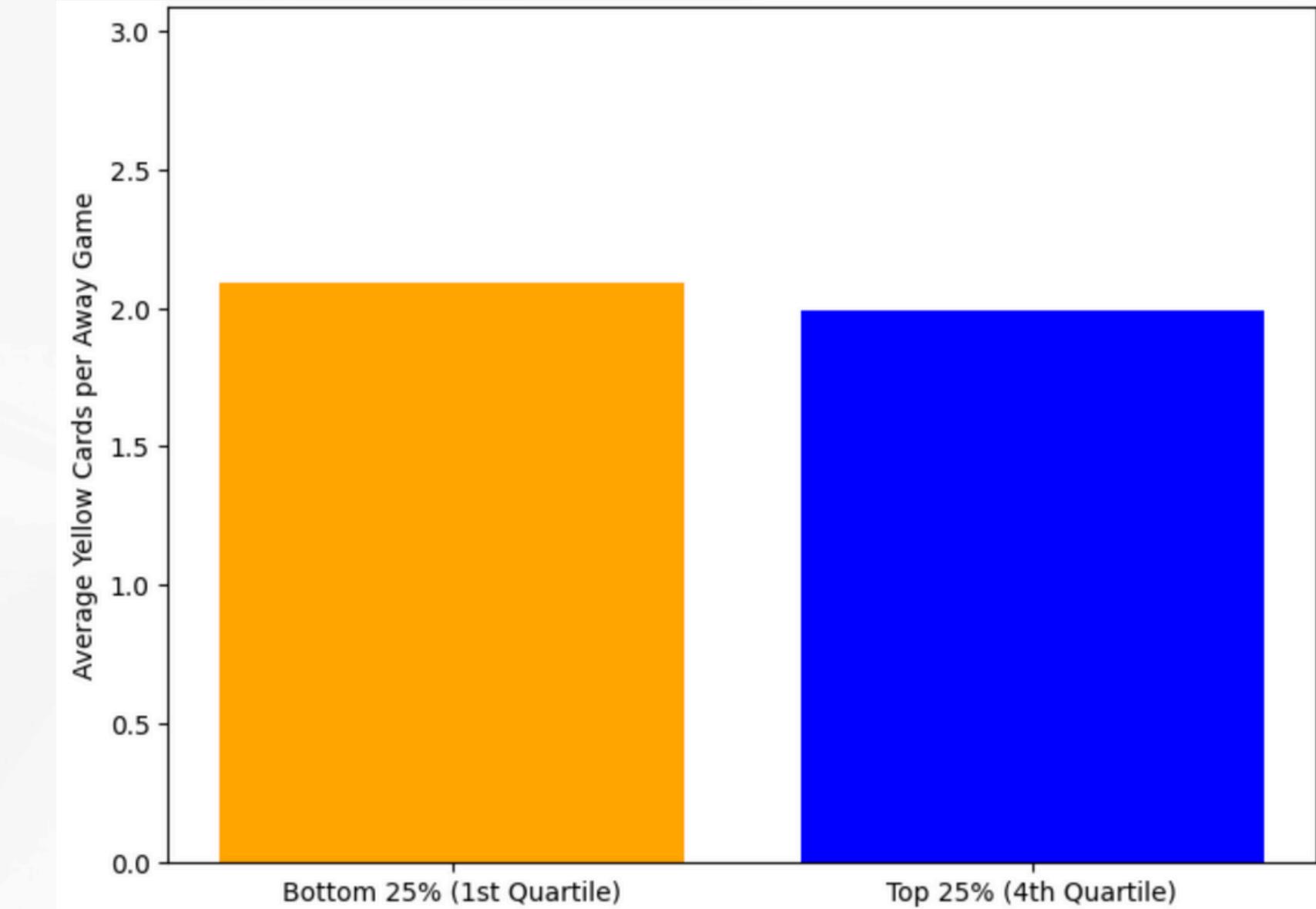
Top 25% ELO teams might play more aggressively or more confident with attacking strategies compare to **Bottom 25% teams**, whether they play **at home or away**

YELLOW CARDS FREQUENCY

HOME GAME



AWAY GAME



Both team categories receives 1 - 2 yellow cards per game

At **home game**, **Top 25% ELO teams** tend to display better discipline

CONCLUSION

In general, teams perform better at home game rather than away game

Top 25% teams tend to outshoot and have more corners than their opponents.

Bottom 25% teams are less consistent than Top 25% teams at outshooting and having more corners.

They also rely more on these factors for their form.

Top 25% ELO teams might play more aggressively or more confident with attacking strategies compare to Bottom 25% teams

THANK YOU!