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Post-Pandemic Play: Evaluating Home Advantage in European Soccer After COVID-19

Proposal Summary

This project analyzes whether the traditional "home advantage" in professional European soccer such as the Premier League or La Liga has declined since the COVID-19 pandemic. The research question is: *Has the frequency and magnitude of home wins decreased in major European soccer leagues since COVID-19, and has this trend persisted post-pandemic?* The goal is to determine if playing at home still provides teams with a measurable competitive edge after seasons without fans in stadiums.

Historically, home teams in soccer have maintained higher win rates due to factors like crowd support, familiarity with the field, and travel fatigue for visiting teams. However, the COVID-19 pandemic disrupted this pattern when matches were played in empty stadiums. This project will analyze how that disruption affected home performance and whether the impact persisted after fans returned. Understanding whether home advantage has declined is important for multiple stakeholders. Coaches and team analysts rely on home-field factors to plan strategies, while sports bettors and data analysts use these trends to model outcomes. If home advantage has diminished, it could shift how teams prepare for away games and how leagues interpret competitive balance. Additionally, this topic contributes to the broader study of how external factors, like fan attendance, affect athlete performance and psychology in professional sports.

Intended Data & Initial Plan

I will use data from Fbref.com, a reliable source for soccer match results, statistics, and team performance metrics. The idea is to compare metrics across three periods: Pre-COVID (2017–2019), COVID (2020–2021), and Post-COVID (2022–2024). Key variables will include home and away goals, win/loss outcomes, and attendance. Home win percentages and average goals scored will be visualized through line charts and bar graphs to illustrate trends over time. If feasible, a regression analysis model will be used to control for differences between leagues and isolate the specific impact of fan attendance. The study may also explore whether smaller clubs were affected differently than elite teams. The combination of descriptive statistics and modeling will help determine if the change in home advantage is statistically significant.

Conclusion/Next Steps

1. Make a GitHub account and set up a repository: This is where the analysis will be developed and documented so I need to familiarize myself with the site.
2. Collect and clean match data: Download match results and team statistics from FBref for the selected leagues and time periods.
3. Refine topic/question: Adjust the focus based on early data insights and feedback from Professor Gadže.