

THE HOME GROUND ADVANTAGE: FACT OR FICTION?

WHAT'S THE BIG DEAL?

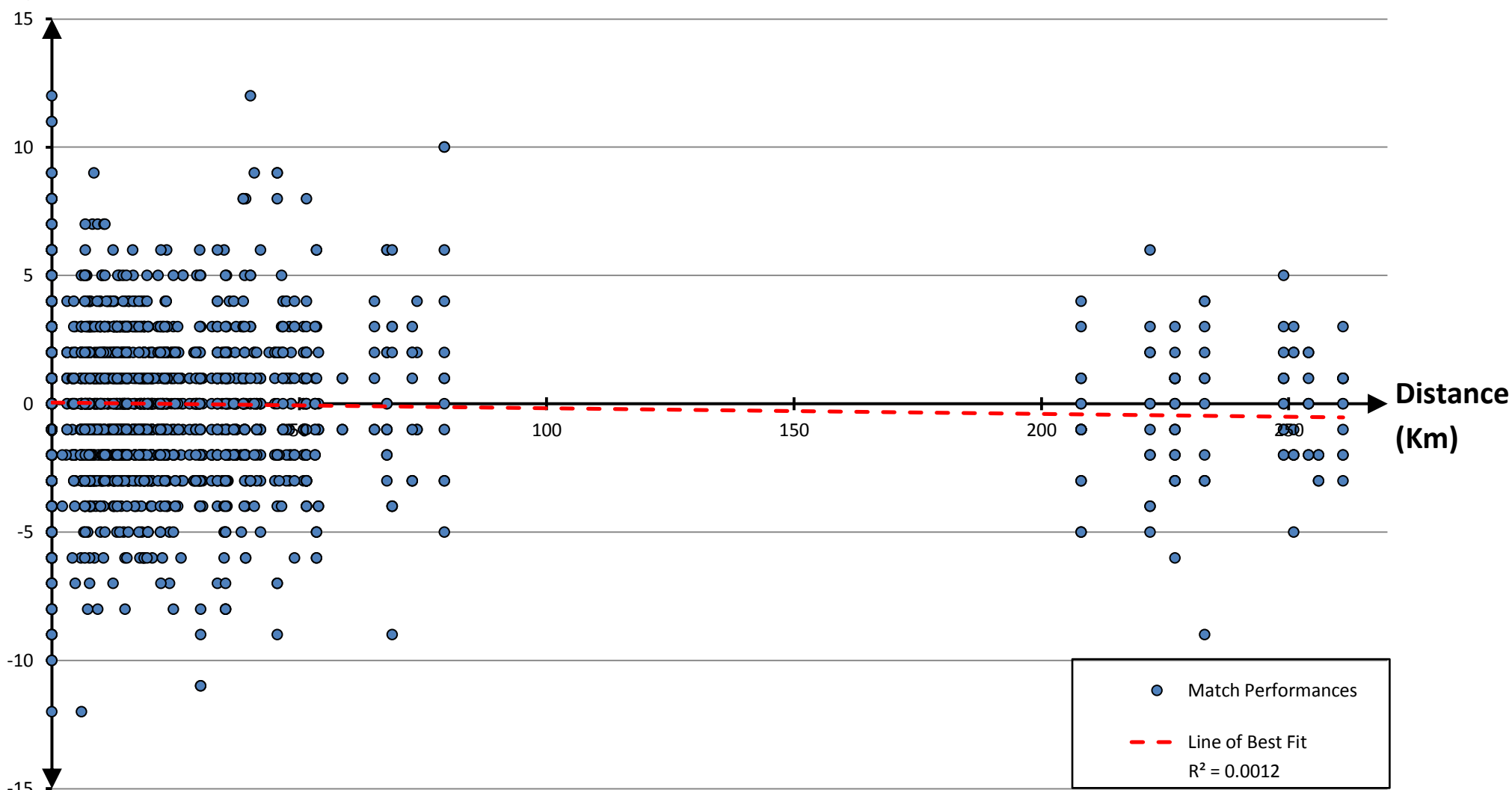
If you've ever been involved in team sports there's a fair chance you've heard of the 'home ground advantage'. It is common to hear coaches and commentators mention that the team playing at home has the advantage, but what does that actually mean? Is it caused by the distance involved in travelling to the ground, or will a team's performance away from home be the same regardless of where they play? Is there even a

noticeable advantage when playing at home, or is it just a common misconception?

Providing answers to these questions will allow coaches and players to understand the actual nature of the home ground advantage and potentially develop more effective strategies as a result.

Score
Difference
(goals)

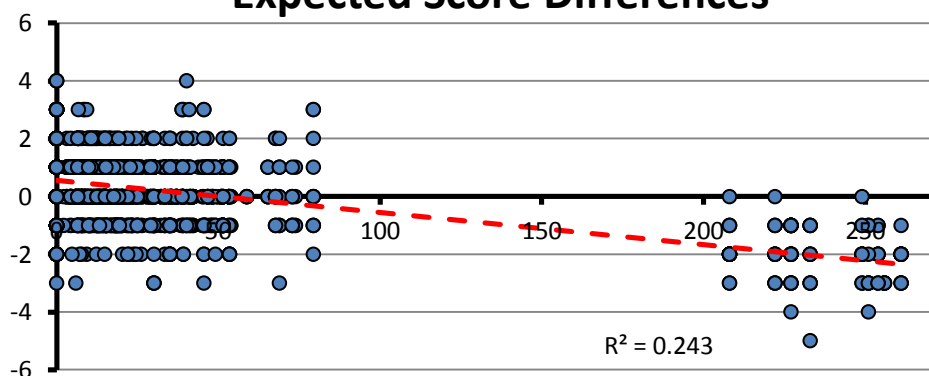
Soccer Team Performance Against Distance



Data obtained from Football Federation of South Australia website

WHAT WOULD A DISTANCE DISADVANTAGE LOOK LIKE?

Expected Score Differences



If there was a disadvantage caused by distance travelled then we would expect a graph like the one above, where the line of best has a greater slope and the data follows it more tightly than the one above.

WHAT DOES ALL THIS MEAN?

The graph above shows a model governing the effect of distance travelled to a match on a team's performance. While this model was determined to be statistically significant, the adjusted R^2 value of 0.0012 implies that attempting to predict the score difference from this model is futile due to the noise in the data set. Additionally, the slope of the line suggests that the impact of the distance would be negligible, even at the furthest matches.

These results strongly suggest that the effect of distance travelled on a team's performance is insignificant, however performing a binomial test using the number of losses and wins at home matches indicates there is a 0.5% chance that the larger amount of away wins is due to chance. From this it can be concluded that a home ground advantage likely exists, but instead of being caused by travel it may be the result of psychological factors and differences in ground conditions.