

PRESS RELEASE

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‘HARDER TO PLAY AGAINST 10’ IS A FOOTBALLING MYTH, PROVE STATISTICIANS

The footballing cliché that it is tougher to beat a team down to 10 players has been roundly disproved by statisticians.

Sports fan Adam Greenberg studied four seasons’ of Premier League data to test the theory, finding that a player sent off “significantly reduces the goals scored and the points obtained by the 10-man team”.

He analysed 238 red cards over 1,520 games to show that in fact having a full set of players on the pitch leads to more goals and more points when playing sides with a man down.

The level of advantage did vary for home and away sides, however. A home team playing against 10-men scored 0.6 more goals on average throughout the game and picked up an average of 0.35 more league points at the final whistle.

Away teams benefited even more when facing 10 men, gaining 0.86 more points over what they would have done playing against a full team.

Losing a defender was found to lead to worse results than losing a striker or midfielder.

The new research debunks the claim often made by pundits that a player sent off motivates a team to defend better. It backs up previous international research looking at games from the World Cup and the German Bundesliga which came to the same conclusion.

The research also looked at the 27 matches that involved multiple red cards. It concluded that a sending-off for the away team does not simply “cancel out” the effects of a home team red card and there is still an overall negative effect on the home team’s points over what would be expected.

The study is covered in the August edition of *Significance* magazine, published by the Royal Statistical Society and the American Statistical Association.

The 2015/16 Premier League season kicks off this weekend.

Commenting on his research, Adam Greenberg said:

“This study clearly rejects the commonly used cliché that ‘it’s always harder to play against 10 men’, and shows it may in fact be easier.”

“This longstanding football myth should finally be given the red card.”

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NOTES

1. The study will be included in the August edition of *Significance* magazine, not yet published. *Significance* is the member magazine for the Royal Statistical Society and the American Statistical Association. Personal subscriptions to *Significance* can be purchased via www.significancemagazine.com. A PDF version of the *Significance* article is attached for journalists’ information but not for further publication.
2. The data studied was from the Premier League seasons 2009/10, 2010/11, 2011/12 and 2012/13.
3. Adam Greenberg graduated from the University of Nottingham in 2014 with a First Class degree in Economics and Econometrics. His interest in football and econometric modelling led him to study the statistical effects of events and decisions in football (such as red cards) as part of his final year dissertation. He now works as a financial consultant and software developer.

CONTACTS

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