

# Football referees do favour home teams, study shows

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Academics have proved what Premiership football managers have been complaining about for years – that referees are inconsistent and favour home teams. Analysing over 2,500 English Premiership matches, researchers discovered that referees were statistically more likely to award yellow and red cards against the away team – even when home advantage, game importance and crowd size were taken into account.

They also found clear evidence of inconsistency between referees – with some referees significantly more likely to punish players than others.

The academics behind the study, which has been accepted for publication in the *Journal of the Royal Statistical Society Series A*, hope that their research will give the football authorities the firm evidence they need to help improve football refereeing.

“The decisions made by referees can influence the result of games and their actions can have important financial consequences for the clubs and individuals involved,” said Dr Peter Dawson, a Wigan fan and lecturer in Economics at the University of Bath.

“Managers have been right to highlight inconsistencies and controversial decisions in games, but without a proper analysis of refereeing decisions over a period of time, their comments look like the usual post-match gripe, especially if they are on the losing side.

“The evidence we have collected and analysed provides a firm factual foundation that will help football’s authorities debate what positive action they might take to ensure fair and equitable refereeing of matches in the future.

“This could include encouraging referees to avoid what is presumably unintentional home team bias

in their decision making, and examining the extent to which corrective action is allowed to vary between officials.”

Researchers, from the universities of Bath, Otago (New Zealand), St Andrews and Wales, Bangor, analysed all 2,660 matches occurring in the English Premiership seasons from 1996/97 - 2002/3 for disciplinary offences (in terms of the number of yellow and red cards awarded) for home and away teams.

They then developed equations to account for the many different variables that could account for the variation in the number of disciplinary offences. For example, they allowed for teams to play better when they were at home and more aggressively when away, for games, such as top-of-the-table clashes, to be more keenly contested, and for larger crowds to (potentially) exert more influence on referees.

As well as finding a distinct home bias in refereeing disciplinary action and inconsistency between referees, the research also highlighted that:

- underdogs tend to incur a higher rate of disciplinary sanction than favourites
- the number of disciplinary offences tends to be higher in matches between evenly-balanced teams, in matches with end-of-season outcomes at stake and in matches with higher attendances
- home teams appear to play more aggressively in front of larger crowds
- the crowd size did not appear to influence the incidence of disciplinary sanction against the away team
- there was no evidence that the behaviour of either teams or referees is any different when the match is televised.

“The football pitch is like a laboratory for crime economists,” said Dr Dawson, from the University’s Department of Economics & International

Development.

“You can introduce a new rule or increase the severity of a punishment and then see how long it takes for the referees and the players to adjust their behaviour.

“In many ways this mirrors criminal behaviour on the streets where it takes criminals and law enforcers time to adjust to the implementation of a new law.

“One example highlighted in our findings is the introduction of the automatic red card for tackles from behind in the 1998/9 season.

“This season saw a rise in the number of bookings and sendings-off, but by the end of the season referees had learned how to implement the rules effectively and players had adjusted their behaviour accordingly.”

This kind of learning behaviour has also been observed in college basketball in North America. When two referees were introduced there was an immediate tail-off in the number of fouls called in a game, suggesting that as referee competence increased, with fewer fouls being missed, the actual ‘crime rate’ must have decreased by even more than is suggested by the fall in the number of fouls called.

Such increased monitoring of games, including the use video replays, is clearly something the governing bodies of football need to look into despite the obvious costs involved.

“Football needs the same kind of in-depth analysis if we are to see improvements in the consistency of the important decisions made by referees,” said Dr Dawson.

Source: University of Bath

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