

Take the money and run... or wrestle

Two economists use statistics to expose sporting corruption. We need more like them, write Andrew Leigh and Justin Wolfers.

THE claim by former Pakistani coach Javed Miandad that his team "threw" a recent one-day series against New Zealand highlights the difficulty in eradicating betting-related cheating in sport. It's easy to understand the bind the cricketing authorities are in: how can they discern real corruption from the sour grapes of a failed coach looking to deflect blame?

What if it were possible to systematically study a sport and discover whether it was corrupt, to rely not upon finger-pointing but on objective economic analysis to determine whether or not corruption was really occurring?

Two professors from the University of Chicago's famed department of economics - Mark Duggan and Steven Levitt - have recently taken up the gauntlet. They wrote a paper which analyses Japan's national sport, sumo wrestling, and the outcomes have been explosive. Honour and ritual, it seems, hide corruption and pay-offs.

Their analysis is startlingly simple. Japanese wrestling tournaments comprise 15 bouts. Wrestlers who win eight or more bouts benefit dramatically more than those who win seven or fewer (in terms of ranking and salary). Thus, for those on the margin of winning eight bouts, the pay-off is disproportionately large.

Analysing the bouts, the two economists find some intriguing results. To begin with, they point out that the proportion of wrestlers who end each tournament with eight wins should be

the same as the proportion who end with seven wins. But, in fact, substantially more wrestlers manage to end with eight wins. Moreover, wrestlers who are on the margin of eight wins on the final day of the tournament are about 25 per cent more successful than one would expect.

But mightn't those who are on the margin of getting the critical eight wins simply put in more effort than their opponents? To test this question, Duggan and Levitt looked at what happened when the same two wrestlers next met. They found that a wrestler who won his eighth bout on the final day of the tournament was 10 per cent more likely to lose when he next met the same opponent. In other words, part of the pay-off for throwing a match is doing the same for one's opponent the next time.

Duggan and Levitt's analysis has important implications for cricket and, indeed, various codes of football. At the heart of their analysis is the idea that sportsmen respond to incentives. In most situations, sporting honour and the joy of victory will be the dominant incentive. But the incentive for corrupt conduct is greatest in situations in which one team cares much more about the result than another. Therefore, "dead rubbers" - games played after the series has been decided - are ripe for corruption. Similarly, it is notable that players on the cusp of retirement have been at the centre of the recent cricketing scandals; a youngster trying to establish his career in the national team simply

cannot afford to make a duck. Another area in which the incentives are distorted is "points shaving". Teams who deliberately win a game by less than the "bookies' start" can potentially both win the game and make money by backing their opponents.

What can we do about sports betting scandals?

Australians love a bet and banning the bookies may be an overreaction. But it seems that points-start betting and betting on "dead" games may be particularly attractive for the crooks, and perhaps the authorities may want to closely monitor attempts to manipulate these types of betting.

Finally, there is the good news arising from the recent high-profile cricketing shenanigans. Duggan and Levitt found that public attention deters match-fixing. In three sumo tournaments that followed media coverage of allegedly rigged matches, the win-loss ratio for wrestlers on the margin was far closer to what would ordinarily be expected. This seems to give credence to the line from Justice Louis Brandeis, of the US Supreme Court, that "sunlight is the best disinfectant".

It also suggests that in today's climate of heightened suspicion, we should perhaps expect less corruption.

Until now, the stars at uncovering corruption have been whistleblowers and investigative journalists. While they will continue to play a role, the lesson from Duggan and Levitt is that economists and statisticians ought to take their place on the starting bench.

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