

Study reveals inner workings of cricket teams

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Professor Lionel Page and PhD researcher Romain Gauriot examined the behaviour of batsmen as they neared landmark scores.

Do batsmen put personal glory before their team? A study by QUT researchers found cricket batsmen who were close to reaching personal milestones were likely to alter their strategy in a way which, at first sight, seems detrimental to the team.

Professor Lionel Page and PhD researcher Romain Gauriot, from QUT Business School, examined the behaviour of batsmen reaching landmark scores in One Day International (ODI) matches.

The research, to be published in the *American Economic Review*, found players were likely to bat more conservatively as they approached a half-century or century to maximise their chances of reaching it.

"We found clear evidence that the behaviour of batsmen is affected by their personal rewards in the game," said Professor Page, who collected data on more than 3,500 ODI matches between 1971 and 2014.

"We found players react to individual-specific incentives in ways which can be detrimental to the team as a whole. For example, if a batsman is close to making 50 or 100, he will play more conservatively and hence score at a slower rate.

"This increases his chances of reaching the landmark score, but at the cost of the team's winning chances. That is because in ODIs batsmen should adopt a relatively high strike rate, taking the risk of losing their wicket to score more quickly."

Contrary to the belief batsmen reach the "nervous nineties" - the idea they are more likely to be dismissed as they approach a century - the QUT researchers found adopting a conservative style at that stage reduced their chances of dismissal.

"We observed that while batsmen are conservative on their way to a milestone, they switch to a more aggressive strategy straight after reaching it, possibly to catch up with lost time," Professor Page said.

"Our data showed a batsmen's strike rate jumped more than 40 per cent after reaching a century compared to the period leading up to it.

"This leads to a sharp increase in the rate of dismissals."

Professor Page said the [third match of the Australia-South Africa ODI series](#) last year was an example of such a pattern. Hashim Alma (102) and AB de Villiers (52) were both quickly dismissed after reaching their respective milestones on the way to South Africa losing the match.

However the research suggested batsmen striving to reach their personal milestones could benefit the team in the long run.

Analysing more than 2,000 Test matches from 1880-2014, Professor Page found captains are far

more likely to declare an innings when a batsman has reached a landmark rather than when he is just below one.

"One of the most interesting finding from this study shows that team captains also react to individual-specific incentives by accommodating them," he said.

"Our evidence suggests that team captains are willing to trade a cost to the team in favour of a substantial reward to a particular player - for example eating up valuable time and delaying a declaration so a batsman can reach his individual milestone."

But Professor Page said a captain waiting for one of his players to reach a personal milestone could be worth the risk.

"For the captain it's about trying to balance the individuals' incentives with the team's collective goal," he said.

"The captain hopes the risk in allowing a player to reach a strictly personal goal is repaid by a higher level of overall performance by not only that player, but other players in the [team](#) who appreciate the captain's gesture."

Provided by Queensland University of Technology

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