



Innovative Applications of O.R.

## Evaluating an alternative draft pick allocation policy to reduce ‘tanking’ in the Australian Football League

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## ABSTRACT

This article considers an adjustment to the method of determining the order of draft picks in the Australian Football League (AFL). Rather than pure reverse order based on the end-of-season ladder (standings), an alternative draft-pick allocation (henceforth called ‘ADPA’) policy is proposed and evaluated. It holds that the draft-pick order rule shall give the top pick the team eliminated first (i.e. after fewest matches played) from the finals series (playoffs), and the remainder in order of elimination. Employing a quasi-natural experiment using data obtained from a sample of 2288 regular-season games from 1997 to 2009, the ADPA policy produced an estimated 21.7% improvement in an already-eliminated team’s probability of winning late-season matches. A review of the business case underpinning the ADPA reveals a series of benefits for the AFL. In addition to improving fans’ late-season engagement, the policy would offer a fairer system of draft distributions that would augment league equalisation and enhance the AFL’s integrity principles.

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## 1. Introduction

Professional sports leagues rely upon a suite of mechanisms to improve competitive balance, distribute revenues, maintain parity, equalise opportunities, exclude corruption and match fixing, prevent cheating, and provide effective incentives to win (see Wright, 2014, for an OR-inspired analysis of sports rules). This article addresses one particular mechanism—a draft policy—that creates tension between two of these objectives in Australia’s largest professional sports competition, the Australian Football League (AFL). Presently, the AFL’s draft policy employs a pure reverse order of end-of-season ‘ladder’ (or league table) mechanism. In principle, the current policy encourages competitive balance in the League by conferring player draft-pick primacy to the teams with the greatest need for superior emerging players, as measured by their proximity to the bottom of the competitive table. However, the reverse-order policy introduces the potential for intentional losses by teams already eliminated from finals participation, which are vying for higher-order draft picks ahead of the forthcoming season. As a result, while the current policy aims to bolster competitive equality, it also has the potential to compromise competitive integrity. This article proposes and evaluates an ‘alternative draft-

pick allocation policy’ (ADPA) designed to attenuate this in-built weakness.

This article evaluates the AFL’s draft-pick allocation rule with the objective of determining whether an alternative policy would provide a superior model for the League in its pursuit of competitive balance. It introduces empirical evidence supporting the ADPA rule designed to mitigate the perverse incentives induced by the current reverse-order element of the AFL national player draft. In addition, the culminating argument draws upon some implications for the League that go beyond the structural and technical improvements that accompany a revised system. It therefore considers the ADPA policy from a broader perspective, in order to place it within the context of the League’s practical governance.

The ADPA rule proposal involves switching the order determination rule from fewest games won at the end-of-season (as currently), to fewest games played at the point of mathematical elimination from the finals series. This pivotal change expedites the draft-pick allocation process for some teams, and removes the need for these teams to continue losing towards the end of the season, so as to maintain or improve their notional first round draft-pick order until it becomes established with certainty.

Towards the conclusion of every regular season, commentary emerges speculating that some of the lowest clubs in the league table are deliberately underperforming. Having already been eliminated from finals contention, and with the season effectively over, these teams have an interest in slipping further down the league

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ladder (or at least maintaining their lowly position) in order to receive a higher-order pick in the player draft at the end of that season. By avoiding any late success in the death throes of a failed season, a team can secure a favourable pick, and in the process get a jump on improved subsequent performances.

Such deliberate failure—colloquially known as ‘tanking’—undermines the competitive credibility of a competition. In addition to compromising a league’s integrity, tanking has the potential to weaken fan interest, reduce sponsor engagement, and introduce a series of problematic legal concerns relevant to gaming and charges of match fixing. Complicating the issue are the ostensibly reasonable explanations for late-season performance declines rather than necessarily being intentional failures. For example, coaches have claimed that player management strategies can account for many of these late-season performance regressions, including the unavailability of prominent injured players, giving playing time to younger and less-experienced players, and the testing of new, high-risk tactics. However, we begin with the assumption that a league—in this case the AFL—is better served with the potential for tanking to be reduced as much as possible, especially so when this can be achieved via a simple, low-cost policy adjustment.

AFL teams that benefit from higher picks in the main ‘national’ draft (and the following discussion focuses purely on this) also do so in both the (albeit less important) ‘rookie’ and ‘pre-season’ drafts. In the AFL case, the draft was inaugurated in 1986. A supplementary ‘priority’ first-round pick system was added from 1993 (adding a further layer of perverse incentives), which was later moderated to the start of the second round of picks (and the eligibility threshold reduced from five wins or fewer, to four – and in two successive seasons) in 2006. In 2012, the AFL decided to award its priority draft picks in a discretionary manner after the final round of matches, but these changes did not fully eliminate the incentive to tank.

Whether tanking is a regular, periodic, rare, or imaginary occurrence may be dependent upon which definition is applied to a team’s actions, ranging from fielding a sub-optimal group of players to explicitly instructing the team to lose deliberately. Nevertheless, the AFL has experience with the incentive problem emanating from their reverse-order draft rule (and exacerbated by the priority element). For example, in February 2013, the Melbourne (Demons) Football Club was found guilty of charges related to tanking on the basis of their performances in games late in season 2009. The club was fined AUD\$500,000 and further League sanctions were issued against key individuals involved, including the then Senior Coach and General Manager of Football Operations.

Here, we do not speculate about the definition or prevalence of tanking or its manner of enactment. Rather, we begin with the premise that tanking is disadvantageous to the AFL because the practice undermines competitive balance, compromises fan interest, unfairly restricts playing talent, and provides opportunity for match-fixing and other forms of corruption (Kendall & Lenten, 2017; Soebbing & Mason, 2009). Indeed, the League’s Integrity Policy outlaws tanking for these reasons. We therefore further assume that any mechanism to achieve a policy position that eradicates, or at least reduces, the possibility of tanking in any form should be favourably considered by the League. The introduction of a policy change to the draft-pick allocation rule that either precludes or prevents tanking through a structural mechanism would bolster the competition’s stated integrity and conduct objectives, irrespective of whether tanking in a soft or hard form is a real problem or just a public-relations nuisance.

The effects of the rule change to reduce tanking examined in this article were evaluated by Lenten (2016) for Major League Baseball (MLB) and National Basketball Association (NBA) game data. Both of these North American professional leagues utilise AFL-like

reverse-order drafts, the NBA including a lottery component. Using economic program evaluation analysis and econometric methodologies, Lenten (2016) developed a statistical model estimating the likelihood of tanking. Teams eliminated from participation in the finals / playoffs have an incentive to tank in late-season games for which the lowest-ranking teams face the highest enticement. However, the rule change Lenten (2016) modelled assigned the higher picks before the last high-incentive games were played. Under the revised policy model, eliminating the tanking incentive, these lower-ranked teams demonstrated a 13 to 18% greater likelihood of winning. Lenten (2016) concluded that the alternative draft policy significantly increased the conditional probability of victory for teams with an incentive to underperform. He proposed that a “highly compelling” case could be made for removing the tanking incentive (Lenten, 2016, p. 40).

This article evaluates the draft-pick allocation rule change and aims to assess whether the policy amendment would likely yield a superior mechanism for pursuing competitive balance in the AFL draft. The second section following, presents the study design and results, revealing through a quasi-natural experiment procedure that a strong case in favour of the rule change can be mounted. Numerous other advantages of a successful anti-tanking rule are discussed in section three. It therefore places the potential new policy within the AFL’s governance context and establishes that its implementation would not only be practical, but would also deliver a suite of further commercial advantages. The fourth, concluding section summarises the ADPA case, noting its superiority over alternative policies, highlights limitations, and recommends future research pathways.

## 2. Research design

### 2.1. Quasi-natural experiment procedure

Given the absence of data, evaluating the impact of a proposed new policy such as the ADPA cannot be undertaken through observational evidence. The study therefore employed a quasi-natural experiment from existing AFL game data, following the design employed by Lenten (2016) for MLB and NBA data. The method compared outcomes of 1) a ‘treatment’ group of matches in which the incentives to one of the two teams very closely approximated the removal of tanking conditions that ADPA was designed to attenuate, against 2) outcomes from another group operating under the same conditions but where the current rule applied. Specifically, the treatment group contained games in which one of the two teams involved had become locked mathematically in its current league rank; it could not move up or down the ladder irrespective of its performance in the remaining games of the season. This team knew with certainty, prior to the final game of the season, which draft-pick position it would receive (ignoring trades and exclusions).

Although this study employed Lenten’s (2016) version of ADPA, a variation earlier proposed by Gold (2010) was considered. It suggested the draft (lottery) order, “...be determined based on how teams perform *after* [emphasis added] becoming mathematically eliminated...” (Gold, 2010, p. 2). Gold’s (2010) rule, like Lenten’s (2016) ADPA, should also improve incentives for eliminated teams to win, but its greater dissimilarity from the present AFL policy made testing via externally valid methods, such as a quasi-natural experiment, impossible. It could, however, be tested and compared to the ADPA policy using an internally valid method, like economic experiments.

### 2.2. Data and sample

The sample comprised a total of all 2288 AFL regular-season games from season 1997 (when Port Adelaide entered in place of

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