

## **Comparing Competitive Balance in Australian Sports Leagues**

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### **Abstract**

During the period following the founding of the Australian Football League (AFL) of the team salary cap in 1985 and the player draft at the end of 1986, within-season competitive balance (measured by the seasonal distribution of team win percents) has increased. This paper continues the investigation into whether the improvement in competitive equilibrium in the AFL can be attributed to these labor market changes by examining competitive balance issues and labor market changes in two other Australian sports leagues, the National Basketball League (NBL) and the National Rugby League (NRL).

The measurement of competitive equilibrium in this idea is expanded to include a simple measure of between-season competitive balance, namely the distribution of championships/premierships amongst teams/clubs. The evidence argues that since 1985 with in-season competitive balance (measured by ASD/ISD ratios) has increased slightly in all three leagues, and both pre- and post-1985 the NRL has been the most balanced and the NBL the least balanced. The distribution of championships/premierships is, in general, also more even in the period post-1985 period in all three conferences.

The most important labor market change in both the NBL and the NRL post-1985 is their adoption of a team salary cap. Hence, the evidence on competitive balance is not inconsistent with The opinion that the introduction of a team salary cap (at least) in all three leagues has improved competitive balance since 1985.

Entirely the same, since 1985 there has also been a net expansion in the number of clubs/teams in all rear leagues, and a considerable turnover in both the NBL and the NRL, but not the AFL. The expansion and contraction of the leagues are compared with changes in their competitive balance, passing to the determination that the number and, in especial, the location of teams/societies is also likely to have been some other major influence on competitive balance.

In earlier work, Booth (2000, 2004a & 2004c) traced the story of labor market devices (and revenue sharing arrangements) in the AFL and found using some simple standards of competitive equilibrium that the competition was more even in the post-1985 team salary cap/player draft cap period than in earlier periods with different labor market devices in use. Thus, this evidence of competitive balance in the AFL is not inconsistent with Booth's theoretical argument that the creation of the team salary cap and player draft has improved competitive balance in the AFL.

### **OWNERSHIP OF AFL CLUBS**

The nature of club ownership in the AFL varies, and in general is immensely dissimilar from the privately owned franchise/teams typical of the US and Europe or the publicly (shareholder) - owned clubs often found in Europe. Most clubs in the history of the AFL have been and are member-owned (now typically companies 'limited by guarantee') with club members typically electing the Board of Directors, who appoint professional managers to run the company. Until 1987, all Victorian-based clubs were member-owned. North Melbourne (the Kangaroos) became shareholder-owned in 1987. From the mid 1980s to the early 1990s, both Sydney and Brisbane each went through a little period of private ownership. Brisbane has now reverted to a traditional member-owned club, whilst the Sydney license is the AFL-owned by its Board approved by the AFL. The two clubs in Adelaide, South Australia (Adelaide and Port Adelaide) and the two societies in Perth, Western Australia (West Coast and Fremantle) are possessed by their respective state football Commissions that also do football in those two states, renting in the SANFL and WAFL competitions (Booth, 2000, 2004a & 2005 forthcoming).

### **OBJECTIVES AND GOVERNANCE OF THE AFL**

In its function as "director of the national competition and keeper of the code" (Australian Football League, 2002, p. 4), the AFL has four objectives which it sees as key to the game's long-term future so as to ensure the AFL retains its position as a leader in Australian athletics.

The AFL's four objectives are: "to effectively manage the national competition to ensure it is the most successful national elite sports competition for the benefit of our stakeholders – our AFL clubs, the players and the public; to promote public interest in the game by building the strongest consumer brand in Australian sport; to promote high levels of player participation in well-managed programs at all levels of community football to ensure Australian Football is the pre-eminent national football code; and to maximise the economic benefits of Australian Football to our member clubs, our players, the supporters, the football fraternity and the community at large" (Australian Football League, 2002, pp. 6-13).

The development of the national league was made easier by significant changes to the governance of the league. Both Dabscheck (1973) and Stewart (1984) discuss the organisational structure of the VFL during the 1970s and early 1980s. At this time, the League was run by a Board of Directors, comprised of one Director from each of the 12 clubs. However, with clubs intent on pursuing policies in their own self-interest, the so-called 'delegate' system seemed incapable of making decisions to solve both the competitive and financial difficulties of the 1980s.

In 1983, the VFL's player rules were declared void as a common law restraint of trade (Dabscheck, 1984). In addition, in the eighteen years of football between 1967 and 1984, the premiership was shared between only five of the twelve VFL clubs. Fifteen of these eighteen premierships were shared between just three clubs; Carlton won six premierships in this period, Richmond five and Hawthorn 4, with North Melbourne winning two and Essendon one. By this simple measure alone, it was evident that the VFL competition over this period was decidedly uneven. Moreover, by the middle of the 1980s the VFL was in serious financial trouble. The competition was incurring heavy losses, and a group of the stronger VFL clubs were planning a breakaway to form a national competition (Australian Football League, 1994, p. 1; Linnell 1995, Ch.2).

In December 1985, the VFL Board of Directors resolved to appoint a Commission with specific

powers to administer the competition, but with the Board (and therefore the clubs) still exercising ultimate control. In July 1993, the transformation of the AFL's corporate governance structure was completed with the Board of Directors' approval of the recommendations of the *Crawford Report*. The *Crawford Report* recommended that all powers to run the AFL competition be transferred to the AFL Commission comprised of up to eight commissioners, a Chairman and a Chief Executive Officer (but with limited powers with respect to the admission, re-location and merger of clubs and also limited powers with respect to the expulsion of a club) and the AFL Board of Directors be abolished (Australian Football League, 2003a, p. 780).

### **FINANCIAL AND PLAYING EQUALISATION (POST 2001) IN THE AFL**

From the formation of the VFL in 1897, Booth (1997, 2000 & 2004a) identifies six different periods (seen in Figure 1 and Table 3) comprising various combinations of different labour market devices and revenue sharing rules used by the league to try to improve competitive balance. Booth (1997) discusses the devices and rules used until the end of 1996. Booth (2000) contains a more detailed discussion than Booth (1997) and includes changes made between 1997 and 2000. Booth (2004a) provides a brief overview of the history of devices and rules identified in Booth (2000). In this section, the discussion of the most recent period Booth identifies (period 6, beginning in 1985) is expanded to include significant changes made between 2001 and 2004, thereby bringing up-to-date the discussion of the period 1985-2004.

To support the 16-team competition, a Special Assistance Fund (subject to various terms and conditions) to assist clubs in difficulty was announced in November 2001. The Western Bulldogs received \$1m in both 2002 and 2003 and the Kangaroos received \$1m in 2003.

After broadcasting football for 45 years since 1957 (except for ABC TV in 1987), a new consortium of the Nine (free-to-air), Ten (free-to-air) and Foxtel (pay) networks secured the national TV rights ahead of the Seven network for 2002-2006 for an estimated \$500m (Macdonald & Borland, 2004, pp. 310-311). The major change in the players' labour market for 2002 was the reduction of the minimum team salary to 92.5% of the total player payments cap

(TPPC).

A Competitive Balance Fund (CBF) providing up to \$5m per club over a three-year period 2004-2006 (to coincide with the end of the current national TV broadcast agreement) was agreed to in 2003. The Western Bulldogs received \$1.5m and the Kangaroos \$1m in 2004 from the CBF (Stevens, 2003, p. 126). The eligibility requirement for listing a player under the father-son rule was increased in 2003 to 100 VFL/AFL games (with interstate equivalents) after being 50 for around a decade, and 20 even earlier (Australian Football League, 2003b). A new CBA was agreed to for the period 2004-2008 which features a moderate 3% growth in the TPPC in both 2004 and 2005, no growth in 2006 and to be negotiated for 2007 and 2008. Minimum senior list sizes come into effect from 2004, 37 in 2004 and 38 in 2005 and 2006 while the maximum senior list (which can now include any number of veterans, rather than the previous two) remains at 40. The total player list including (up to 6) rookies cannot exceed 44 (Australian Football League, 2003b). During 2003, the AFL announced the future phasing out of the 15% cap loading (for higher cost of living) to Sydney and the 10% loading (to help retain players in the non-traditional Australian football state) to Brisbane (Australian Associated Press, 2003b, p. 45) and their replacement with more general allowances depending on a club's number of interstate players (Australian Associated Press, 2003a, p. 36). In 2004, Melbourne applied for \$1.5m in 2004 and \$5m over four years from the CBF (Sheahan, 2004, p. 43).

In summary, the most recent period 1985-2004 roughly coincides with the term of the Commission, during which the AFL has pursued a policy of 'financial and playing equalisation' to improve competitive balance. A team salary cap and national player draft have been the major devices used to influence the distribution of player talent, complemented by the continued use of various revenue sharing rules designed to make clubs' revenues more equal.

As guest editor on a symposium in the *Journal of Sports Economics* on competitive balance in sports leagues, Zimbalist (2002) suggests, "there are almost as many ways to measure competitive balance as there are to quantify the money supply" (p. 112). Some of the more

commonly used measures are listed in Table 1 and discussed in this section. These measures of competitive balance have various strengths and weaknesses which are discussed in detail by authors such as Eckard (1998, 2001a, 2001b & 2003), Humphreys (2002, 2003a & 2003b), Utt and Fort (2002), Fort and Maxcy (2003), Zimbalist (2003), Kahane (2003) and Leeds and von Allmen (2005).

The debate over how best to measure competitive balance involves two aspects. One aspect sports economists have tried to measure is so-called within-season competitive balance (which focuses on the relative quality of teams in a season). The other aspect is between-season competitive balance (which focuses on the relative quality of teams over a number of seasons).

In a league of teams with equal playing strength, the probability of winning any game is .5. The value of the idealised standard deviation (ISD) depends on the number of games (rounds) in a league season. Quirk and Fort (1992) point out that it follows from the properties of a binomial distribution that the value of the ISD for the season-long win percent is equal to  $(.5)/\sqrt{N}$ , where  $N$  is the number of league games (rounds) in a season. For example, the ISD for the 22-game AFL season is  $(.5)/\sqrt{22}$  which equals 0.1066. The ratio for each year can be calculated by dividing the actual standard deviation (ASD) by the idealised standard deviation (ISD). The lower is the ASD/ISD ratio the more within-season competitive balance there is in the league.

The problem with relying solely on the ASD/ISD ratio is that this measure of (within-season) competitive balance is unable to capture changes in league standings (or win percents) of teams over time, that is, between-season competitive balance. For example, a league could have the same ASD/ISD ratio in two different years either with or without changes in individual team win percents (and ladder positions). In such cases, the constant ASD/ISD ratio would not capture the change in relative win percents (and ladder positions) from season to season, so-called between-season competitive balance.

Sports economists such as Eckard (1998, 2001a, 2001b & 2003) and Humphreys (2002, 2003a

& 2003b) discuss the merits of various measures designed to capture changes in relative standings of teams over time. These include the analysis of variance (ANOVA) of all annual team win percents over time. However, according to Eckard (2001a), these measures have more stringent data requirements, in particular, “that the league should consist of the same teams throughout the period and each team should play an equal number of games against each other team” (p. 215) which, as we shall see has not been the case in the AFL, NBL and NRL in the period under examination. Herfindahl-Hirschman Indexes can be used to measure concentrations of teams in certain positions, such as the top and bottom four, but as Eckard (2001a) notes these indexes need to exclude new (expansion) teams.

### **EXPLAINING COMPETITIVE BALANCE IN THE AFL**

There is a body of literature which suggests that, *ceteris paribus*, under free agency, a league comprised of win-maximising clubs is likely to have less competitive balance than a league comprised of profit maximising teams because of different incentives to acquire player talent (Booth, 2000, 2003, 2004a, 2004b, 2004c & 2005, Késenne 1996, 2000 & 2001 and Fort, 2004). More particularly, Booth (2000, 2004c) argues that in the AFL, a league comprised of member-owned win-maximising clubs, the team salary cap and player draft tend to reinforce one another, since a player cannot be drafted unless it can be demonstrated to the AFL that his anticipated salary can be fitted under the team salary cap. Whilst cash sales of player contracts are not permitted in the AFL, the trade of players/draft selections can partially undo the effects of the player draft. However, if the player draft is combined with a ‘hard’ and enforceable team salary cap and teams have the revenue to actually pay the team salary cap, there appears little incentive for a win-maximising club to trade away (net) player talent. Nor are there any financial incentives for (net) player talent to change clubs (Booth, 2000 & 2004b).

Club revenues have typically been large enough to allow even those with the lowest revenues to pay the team salary cap. If not for 50-50 gate revenue sharing over the years and league-revenue sharing of key income streams from national broadcast rights, corporate sponsorship and finals,

the revenues of the smaller clubs might not have been sufficient to pay the team salary cap. Financially-embattled Fitzroy was an exception and was merged with Brisbane at the end of 1996. Whilst there is agreement that revenue sharing arrangements in general have no impact on competitive balance in a league of profit-maximising clubs, revenue sharing can improve competitive balance in a league of win-maximising clubs (Booth 2000, 2003 & 2004c; Késenne 1996, 2000 & 2001). In any case, 50-50 gate sharing was abandoned from 2000 in favour of the home team keeping the net gate receipts (after deduction of match expenses).

The team salary cap has been strongly enforced in recent years with Essendon and Melbourne in 1999, Fremantle in 2001 and Carlton in 2002 having all incurred large fines and national draft selection losses following team salary cap breaches.

In conclusion, the evidence is not inconsistent with the view that in the AFL, a league comprised of win-maximising clubs, the player draft, team salary cap and revenue sharing have all played their part in helping to achieve higher levels of competitive balance (Booth, 2000 & 2004c).

Perhaps the major problem with concluding that changes in the players' labour market (and in revenue sharing) have improved competitive balance is that over the period in question there have also been changes in the location and number of teams which may have also affected competitive balance. Sanderson and Siegfried (2003) and Fort (2003) discuss this (and other issues) affecting competitive balance. It might be that competitive balance in the AFL since 1985 has also increased as a result of the move of another financially-embattled club, South Melbourne, to the large but non-traditional football market of Sydney in 1982, and the introduction of a new (expansion) team into another large but non-traditional football market of Brisbane in 1987, as well as further expansion later into the smaller but traditionally stronger football markets in Perth and Adelaide.

In the AFL, the member-owned nature of clubs could be a major factor inhibiting a merger



and/or relocation to a more viable market and thus a more competitively balanced league. On the other hand, this ownership structure may have some advantages in building ‘brand loyalty’ and the league might be more willing to give financial support to a member-owned club than a privately-owned team.

Both the Sydney and Brisbane clubs went through short periods of unprofitable private ownership (Booth, 2004a) and neither team had immediate playing success. South Melbourne moved to Sydney in 1982, but it wasn’t until 1986, 1987, 1988 and 1989 that the Swans won 50 percent or more than of their games. This was followed by another lean spell between 1990 and 1995 until procuring a Grand Final spot in 1996 after which the Swans won more than 50 percent of their games every year except in 2000 and 2002. Though it wasn’t until 1995 that Brisbane first won more than half of its games, the subsequent merger with Fitzroy in 1997 both removed a relatively-uncompetitive team (Fitzroy won more than half its games only once in the 7 seasons between 1990 and 1996, in 1993), and provided the impetus for the Brisbane Lions to achieve win percents above .50 consistently from 1999 to 2004, culminating in three premierships in a row from 2001-2003 and a Grand Final spot in 2004. The introduction of two new teams in both Perth (West Coast in 1987 and Fremantle in 1995) and Adelaide (Adelaide in 1991 and Port Adelaide in 1997) in cities which were strong supporters of Australian football increased competition for the traditional Victorian-based clubs. These four clubs have large membership bases and revenue streams and three of the four clubs have achieved playing success relatively quickly; West Coast winning premierships in 1992 and 1994, Adelaide in 1997 and 1998 and Port Adelaide in 2004. Only Fremantle is yet to win a premiership.

When we include Brisbane’s three flags (2001, 2002 and 2003), expansion teams have won eight of the 13 premierships between 1992 and 2004. For purposes of comparison with other leagues later, since 1985, excluding the relocation of South Melbourne to Sydney, there have been 5 expansion teams (Brisbane, West Coast, Adelaide, Fremantle and Port Adelaide) in the AFL (one of which, Brisbane, was subsequently made stronger with a merger), and of the 20 premierships contested since 1985, 8 have been won by these expansion teams (Table 9).



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