

Submission to the Australian Senate Inquiry

Into the Future of Rugby Union in Australia

October 2017 submitted by Andrew Luscombe

Summary of topics:

Lack of Super Rugby Equalisation Measures – this has contributed to the situation the ARU finds itself in, which it is trying to rectify by discontinuing a team.

Alternatives to Discontinuing a Team when Controlling Costs and Improving Competitive Balance of Super Rugby – Industry standard equalisation measures provide an alternative method of controlling costs, and any decision making process should consider these alternatives as part of any decision to discontinue a team.

Super Rugby Governance Issues – SANZAAR is governed by a board constituted of partisan representatives. It does not meet the standards of governance of modern sports leagues, or of the ARU itself, which are generally governed by a board of non-partisan experts.

Some Comments on ARU Analysis – possibly contributing to decision to discontinue a team.

Standard Financial Controls and Equalisation in Sport

Competition is one of the defining elements of the word “sport”. Competitive balance is seen as important by the management of sports leagues. Many rules and policies are used to foster competition in modern leagues – salary caps, drafts, revenue sharing, recruiting zones, and transfer fees all have long histories of use. Even children in the park, or at lunch time at school, know it is important to balance the two teams, and commonly use a simple draft before each match in which two captains take turns picking players. This has probably occurred since the dawn of modern team sport.

Winning is important to teams, which are typically made up of, and run by, people of a particularly competitive nature. Unless restricted by league rules, teams often spend all their income in an attempt to field winning teams, and it is reasonably common for teams to bankrupt themselves in an effort to compete on the field. For this reason, league expenditure rules are common, and salary caps often serve a dual purpose of fostering competitive balance and limiting expenditure. Teams are driven to win to the point of breaking expenditure rules and salary caps, but nevertheless such rules still play an important role in limiting and controlling costs.

While recruiting zones and transfer fees have reduced in prevalence of the last 30 or so years, salary caps and revenue sharing, and to a lesser extent drafts, have become industry standards in league management. The list of leagues using these is long.

There are many major soccer leagues in the world in which league management is less active in equalising teams than in most professional sport. Because of this, some might question that salary caps and revenue sharing are industry standards. However, soccer is a low scoring sport, and so luck plays a larger part in match results than in other sports. There are few scoring events per match, and a lucky goal or two reasonably often results in less talented teams drawing with or beating more talented ones. The rules of the game itself provide a degree of equalisation that the rules of other sports do not. For this reason, soccer leagues can often do reasonably well from a competitive balance point of view with less off field equalisation than other sports.

The closest sports to rugby union in terms of the importance that a single scoring event has to the average match are American football, baseball, and rugby league. The simplest measure of this is calculated by dividing the average match points total by the most points that can be scored in a single scoring event. Rugby's ratio, and the ratio for these similar sports is in the range 9-12. Soccer's ratio is about 3. Ice hockey is closest to soccer with a ratio of 5-6, but ice hockey leagues still commonly use salary caps, drafts, and revenue sharing. In nearly all sports except soccer, salary caps and revenue sharing are standard, and even some soccer leagues have these policies.

Active equalisation and expenditure controls are standard industry practice for all of rugby union's peer sports, and have been for 20+ years.

Super Rugby Current Controls and Equalisation

Super Rugby has no league wide equalisation measures, or consistent cost controls. It has some policies applied nation-by-nation that if applied league wide might provide equalisation, but they are not applied league wide, and are applied in an unusual manner that ends up achieving an unbalancing of teams if anything.

One example of a cost control is the Australian salary cap. One feature of the Australian cap is that the portion of player pay derived directly from the ARU is not counted as part of this cap – “top ups” as they are known. The result is that top players can negotiate combined packages to stay in their home state with the ARU paying a large portion of their pay. In many other sports this would constitute a salary cap breach, but in this case the body that enforces the cap is actively involved in it, and it is not against any rules. Teams without home grown players are limited in their ability to attract top players by the salary cap, while teams with a large number of home grown players can deploy a more expensive team than the salary cap allows.

The Australian Super Rugby salary cap effectively functions as a status-quo preserving measure within Australia rather than an equalisation measure. It's possible to argue for some benefits of the Australian salary cap. It provides a degree of cost control, and some incentive to develop local players (although not the funding), but the point being made here is that what might on the surface appear to be an equalisation measure is not.

Only Australian teams have an explicit salary cap, the NZRU exercises a different, more flexible control over their Super Rugby teams (the players are all employees of the NZRU), while the SARU is different again. League wide, there are varied restrictions on player movement across international borders, varied collective bargaining agreements, and a segmented player market. Ultimately, each nation is faced with the prospect of limiting their teams' performance relative to teams of other nations, and lowering the popularity of the sport across their nation, as they try to control team expenditure to allocate money to lower levels of the game.

The segmented controls provide no more equalisation than a free market for the league as a whole, the main difference is perhaps an increased potential for teams within each nation to rise or fall together. You'd expect such an arrangement to be prone to low competitive balance, with some teams spending beyond their means, and have a difficult time in adding teams (which are normally particularly dependant on equalisation measures), while filling some media markets with winning teams and others with losing teams.

The lack of uniform equalisation measures and financial controls has contributed significantly to the situation the ARU and SANZAAR finds itself in, and the controls within nations have contributed to newer teams in particular facing failure before other teams.

Application to Super Rugby

Some might point to the importance of national teams in rugby, and to the varied economic and geographic situations of Super Rugby teams, as reasons why Super Rugby cannot implement the standard practice referred to above. However, to various degrees, other leagues face the same challenges. A number of leagues operate over thousands of kilometres, across international borders, with multiple currencies, in multiple time zones, in cities of various economic means, and with the presence of national team operations.

Ice hockey for example faces many similar challenges to rugby union with its two largest leagues spread across nations. The NHL has a situation where the United States provides three quarters of the audience and teams, but produces only one quarter of the players. The KHL (the second most prestigious ice hockey league in the world) operates in 7 nations, with GDP per capita varying from US\$42,000 to \$US6,000, and spanning 9 hours of time zones. It is a financially significant league with 27 teams and top players earning the equivalent of over US\$5 million per year. Ice hockey also has significant competition annually between national teams, and there have been disputes between national teams and league teams about access to players and timing of competitions.

Given various differences between teams, one size often does not fit all, and leagues sometimes adjust salary caps and revenue shares for particular teams to create competitive balance while controlling costs. Even the AFL, which operates in a single nation, varies salary caps and revenue distribution to adjust for the situations of particular teams.

Such adjustments are sometimes ad-hoc, and also sometimes controversial with accusations of unfairness, but they need not be. In leagues that operate drafts, low performing teams are normally given priority draft picks depending on previous season finishing position, and this is largely uncontroversial. It is similarly possible to adjust salary caps and revenue distribution systematically

with lower performing teams getting an increased share, and higher performing teams getting a decreased share, with accompanying adjustments to salary caps to ensure financial viability. Given that currently contracted players' pay is subject to employment contracts and has a large fixed component, variations in a salary cap from year to year would primarily affect the ability of teams to attract new players. The result would be similar to giving priority picks in a draft, the main difference being that no player would be forced to go to a destination they did not agree to. NZRU achieves something vaguely similar by means of directly employing all NZ rugby players.

Financial adjustments as outlined above would compensate for anything that affects team performance without needing to understand precisely the impact that any particular factor has – this includes different travel schedules, different access to national team players, different attractiveness or expense of living in various cities, long term fluctuations in currencies, and so on. Anything that systematically affects team finishing position in the league would be adjusted for. National team players, or a core squad of key younger players being “blooded” into national teams, could be kept relatively close to home. Other players could be free to move across the league, or leave to, or return from, overseas leagues, to balance the strength of teams across Super Rugby.

The point of the above paragraphs is not to propose possible solutions to Super Rugby's problems, it is only to show that there are a number of potential avenues available to control costs and improve competitive balance in Super Rugby. It is surely not beyond the ability of Super Rugby administrators to borrow or create an effective equalisation and cost control method.

SANZAAR/ARU (lack of) Efforts towards Equalisation Measures

Despite the proven value and even necessity of such measures, standard industry practice appears to have been ignored. There is little public evidence, if any, either of the ARU attempting to persuade its SANZAAR partners to consider consistent use of equalisation measures and expenditure rules across Super Rugby, or of SANZAAR considering such measures. Certainly nothing has been implemented.

During the first half of 2017, the ARU was able to renegotiate with broadcasters and SANZAAR partners the same revenue for a reduced number of teams and a program involving less matches overall. This shows a willingness on the part of the ARU's partners to consider significant changes in adapting to the situation the ARU and SANZAAR finds itself in. It also shows considerable negotiating skills on the part of the ARU. It is difficult to believe that the ARU's partners would not consider well-made arguments for what is standard practice in other leagues.

Most other sports league administrations would likely have implemented something some years ago as Super Rugby attendances and viewership began to decline, or even before such a decline began. Standard industry practices should certainly be examined before cutting a team, which is a course of action that has created significant controversy and PR damage to other sports in the past. In fact, it will still be necessary to consider these practices no matter no matter how many teams are in Super Rugby in the future, unless the league itself ceases. They should be explored and given genuine open minded consideration.

SANZAAR and Australian Rugby Governance Issues

Perhaps the reason that SANZAAR has not managed the league as most modern leagues do is that all the participants on the SANZAAR board are partisan – that is, they are there to serve the organisations that appointed them rather than the league as a whole.

When board members are representing other organisations, they have a duty to attempt to retain more control rather than less for the organisation from which they come. This is to maximise the ability of the organisation from which they come to fulfil its role. The board is more like a forum for mediation of interests rather than a group dedicated to actively and cohesively controlling towards agreed goals.

The ARU itself moved away from this model for its own governance several years ago because it saw such a model as sub-optimal and outdated. A report was commissioned which recommended the move to a non-partisan board appointed for its expertise and with a duty to serve the overall organisation rather than a duty to serve other organisations. This report contained many good reasons why governance should be carried out according to such a model. It pointed out that the individuals involved under previous governance had long been competent and performed admirably and with integrity. The governance arrangement itself was simply seen as inadequate and contained conflicts of interest. SANZAAR is faced with very similar governance issues that the ARU had in the past – governance by members responsible to other organisations and a secondary interest in the league.

Perhaps the ARU's change to an expert non-partisan board has increased its ability to control and manage its partners in a way that benefits the power of the ARU. Perhaps this is detrimental to Super Rugby and prevents standard solutions from other sports from receiving much consideration, because they are all about coordination and centralisation of power rather than devolution. Given Australian rugby's dependence on international competitions, a strong national board is not necessarily of as much benefit as it would be for the sport if it was only domestic.

In modern sport, it is standard practice for leagues to have non-partisan expert boards because the good operation of leagues is of critical importance to modern sport. Sometimes national bodies govern a national league, because in the case of a national league a national sports body can be neutral enough and there is a close alignment of interests. However, even in the presence of well-run national sports bodies, national leagues are still often managed separately from those bodies. This is the case for example with rugby union in England and France, the countries with the two strongest leagues that are drawing increasingly significant talent away from Australian rugby.

If the two major competitions that Australian rugby depends on for most of its income (the Rugby Championship and Super Rugby) are not managed with modern best practice sports governance, then rugby in Australia still has significant governance issues, despite governance changes made several years ago to the ARU.

Performance Benefits of Cutting a Team

One reason given by the ARU for reducing to 4 teams is to increase the competitiveness of the remaining teams by concentrating talent, and thereby hopefully attracting more fans to the remaining teams, although of course with less teams and matches in Australia there would need to be a large increase to make up for the losses. This appears to be the second most common and important reason given by the ARU for cutting a team, after saving money, and it is worth looking at what evaluation was made in this regard.

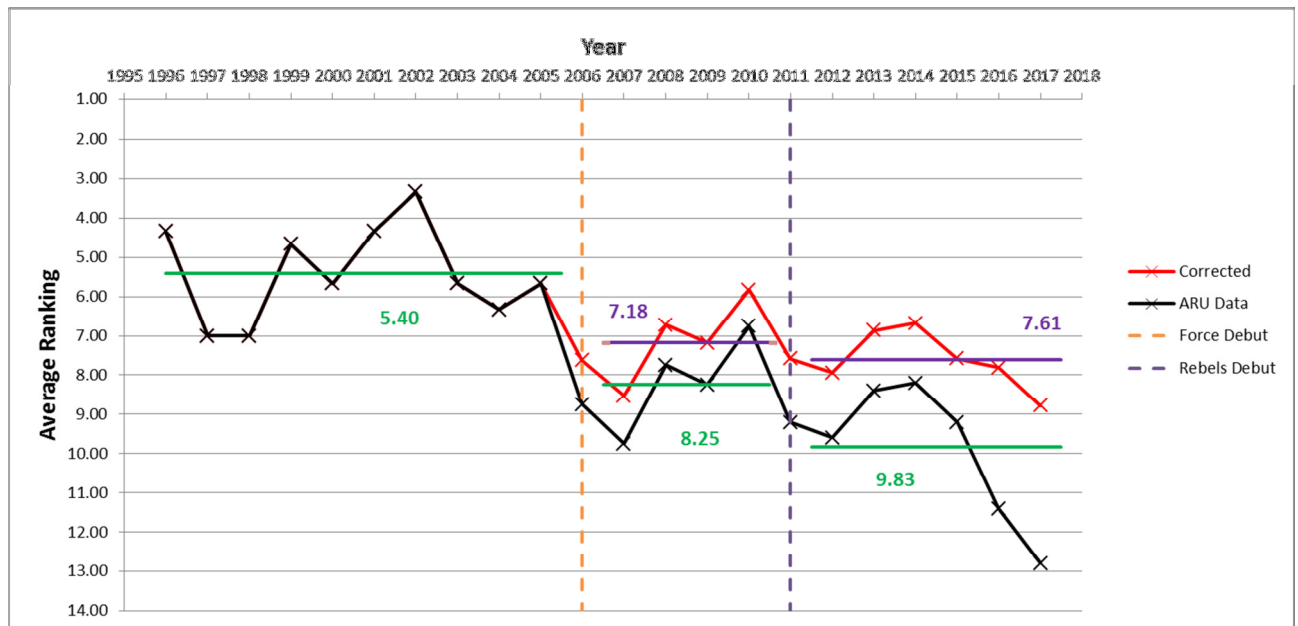
Apologies for the mathematical nature of the following sections, which some readers may find dry and boring, but it is unavoidable when discussing numerical analysis presented by the ARU.

ARU Chart

The ARU presented a chart at the press conference announcing the cutting of a team on 10th April 2017 showing Australian team performance in Super Rugby declining as each team was added. It was not stated that this would reverse exactly as the number of teams is reduced, but by presenting the chart the introduction of a fifth team was blamed for the decline, and no one was actively dissuaded from thinking that reducing to 4 teams would largely reverse it. No similar history of attendance or any estimation of any attendance increase due to expected improved team performance was presented.

In fact, the degree of decline shown by the chart is more a result of the method of calculation than of the actual decline. The chart did not properly adjust for the increases in the number of teams over the years. For example, an average team in an 18 team league would finish 9th or 10th in an 18 team league, but 6th or 7th in a 12 team league. Also, with three teams the highest average rank that can possibly be attained is 2 (average of 1, 2, and 3), but with 5 teams the highest rank possible is 3 (average of 1, 2, 3, 4, and 5). There are a number of effects on average ranking such as these that are simply a property of the number of teams rather than team performance.

The chart below shows a recalculation of the ARU chart together with lines and figures adjusting for the number of teams.



The black and green lines, and green recreated figures, deviate slightly from those presented by the ARU. Either they or I have some minor typos. However the figures are close, and the shape and trend in the recreated figures is the same as the ARU's. The red and purple lines, and purple figures, have been added, and correct the ARU lines and figures for the number of teams.

The main thing to note is that much of the decline in the ARU chart is due to the mathematical method. As the number of teams increases, this causes the line to trend downward. Once 18 teams is reached, the gap due to mathematical method is large – bigger in fact than the decline in performance.

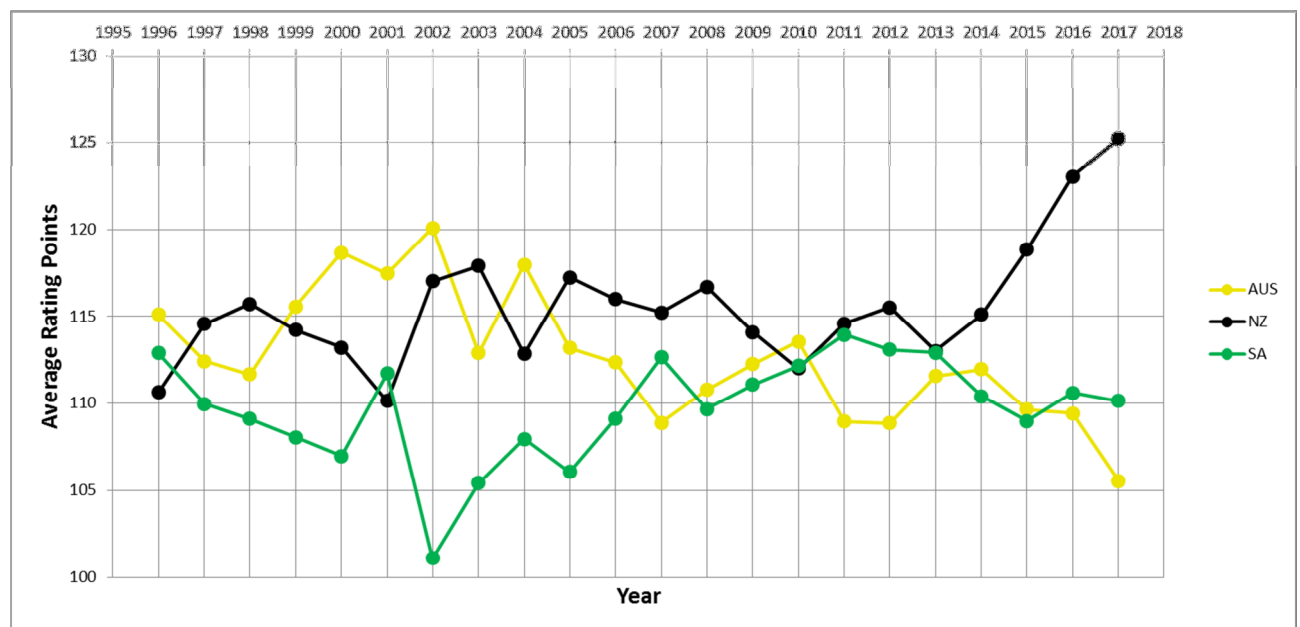
It is possible that due to this chart the ARU may have overestimated the decline due to adding a fifth team, and also the gains from reducing to 4 teams. If the benefits of moving to 4 teams were seen to be as small as between the purple 7.18 and 7.61 figures, they possibly would not have made the same decision. Based on the shape of the charts, the ARU may also have misunderstood the nature of the problem facing Super Rugby, and the required solutions.

Another reason that the chart above is not as accurate as desired is that there have been changes in the competition structure that adversely affect competition ranking as a useful indicator of team competitiveness. The move to conferences means that teams are often faced with different strength of opponents. Also, teams are sometimes elevated into a finals ranking position because of finishing top of a conference rather than due to overall performance.

A More Useful Chart

Most ranking systems, such as those used by World Rugby to rank national teams, adjust for strength of opponents and are better used for comparing team strength. One such ranking system is the one used by Dr. Niven Winchester to publish the rankings on the www.rugbyvision.com web site. The ranking points in this system are designed so that the difference between two teams' ranking points gives the expected margin of victory if the two teams were to play each other. The ranking figures in each league are normally set to average 100, but teams from different leagues can be compared if an appropriate number is added to the figures from one league or the other to take account of the difference between the overall strength of the leagues.

The chart below has the average set to 112.5 for reasons that will become apparent later, but the important thing to note in the chart is the relative position of the lines representing Australian, New Zealand, and South African teams. The numbers in this chart are not directly from the Dr. Winchester's web site, but they are calculated by a similar method.



The most striking feature in the chart above is the black line sloping upwards towards the right. This represents the dramatic improvement that New Zealand teams have made in recent years, with their three best years ever, and the two best years by some margin that any nation's teams have ever had.

Super Rugby is at least as unbalanced as it has ever been, and the years of NZ teams' unprecedented performance correspond reasonably well to the dramatic fall in attendances and viewing figures. The years from 2009 to 2013 are when the league was most competitive, and these years correspond to the peak attendance and viewing figures of the league. None of these correspondences prove anything, but they are evidence to support the value of equalisation that was discussed in the above sections of this submission.

If you didn't know the years when Australia had 4 and then 5 teams, it would be difficult to pick these years based on this chart. Australian teams averaged 111.6 with 4 teams while there were 14 teams in the competition, and 110.2 while there were 15 teams – the first 5 years that Australia had 5 teams. The difference (1.4) is small compared to the year to year fluctuations. South Africa's average was higher with 5 teams (111.5) than 4 (107.9). New Zealand had 5 teams throughout. The number of teams clearly has a relatively minor relationship with average performance.

The Australian line in the chart slopes generally downward to the right, and the number of Australian teams has increased over this period, but correlation is not causation, and the shape of the Australian line chart could be due to many factors. The final slope down for example corresponds reasonably well to the ARU being run by an independent expert board, and I am not suggesting that the governance model has caused this decline. Using the www.rugbyvision.com ratings, it is possible to estimate the component of the decline related to adding a fifth team, and of any increase due to reducing from 5 to 4 teams.

The following table shows the global rankings (national teams) compared to Super Rugby rankings. These numbers are directly copied from the www.rugbyvision.com web site. 12.5 was added to the raw Super Rugby rankings points to produce the right most column for comparison with national teams. The Jaguares with 108.52 match closely to the Argentina team with 109.29. The Argentina team and the Jaguares had only a single different player in 2017, and so would be expected to have the same ranking points. The Sunwolves also score very close to the Japan national team. Three quarters of the players in the Sunwolves and Japan teams are the same.

Global Rankings		Super Rugby Rankings		
1 st Oct 2017 Top 17+		7 th August 2017		
Team	Rating	Team	Rating	Rating+12.5
B&I Lions		Crusaders	115.98	128.48
B&I Lions	134.18	Hurricanes	115.16	127.66
England	123.13	Lions	114.08	126.58
Ireland	119.74	Highlanders	110.20	122.70
Australia	118.05	Chiefs	109.83	122.33
South Africa	117.33	Sharks	102.39	114.89
Wales	113.60	Stormers	101.60	114.10
France	111.39	Brumbies	101.44	113.94
Scotland	110.67	Blues	99.54	112.04
Argentina	109.29	Jaguares	96.02	108.52
Fiji	99.59	Force	95.86	108.36
Samoa	93.15	Bulls	95.48	107.98
Japan	92.74	Waratahs	93.92	106.42
Italy	92.60	Cheetahs	93.47	105.97
Tonga	92.22	Kings	93.21	105.71
Georgia	89.06	Reds	92.40	104.90
USA	85.25	Rebels	85.97	98.47
Romania	82.16	Sunwolves	83.44	95.94

The following table shows a comparison between the ratings points of representative teams and “feeder” teams. The representative teams (usually national teams) are made up of the best players from the feeder teams (usually Super Rugby teams), and this provides an indicator of how much performance benefit can be gained by concentrating player talent.

New Zealand		Australia		South Africa		Britain & Ireland	
Team	Rating	Team	Rating	Team	Rating	Team	Rating
				Lions	126.58		
Crusaders	128.48	Brumbies	113.94	Sharks	114.89		
Hurricanes	127.66	Force	108.36	Stormers	114.10	England	123.13
Highlanders	122.70	Waratahs	106.42	Bulls	107.98	Ireland	119.74
Chiefs	122.33	Reds	104.90	Cheetahs	105.97	Wales	113.60
Blues	112.04	Rebels	98.47	Kings	105.71	Scotland	110.67
Average	122.64	Average	106.42	Average	112.54	Average	116.79
All Blacks	136.18	Wallabies	118.05	Springboks	117.33	B&I Lions	134.18
Difference	13.54	Difference	11.63	Difference	4.79	Difference	17.40

The median difference between the representative teams and the average of the teams contributing to the representative team is 12.59. This indicates that a representative team would be expected on average to beat its contributing teams by 12.59 points. The median number of teams contributing to the representative teams is 5 (close to 4) – so halving the number of teams and thereby concentrating talent by a factor of two would be expected to result in teams about 6 points better, and halving again would result in approximately another 6 point improvement giving approximately a 12 point improvement when going from 4 or 5 teams to one. This is logarithmic interpolation (log base 2), and using a logarithmic function to interpolate gives the following table of expected average ratings for the current Australian teams if concentrated down to various numbers of teams:

Number of Teams	Average ranking points
1	119.00
2	113.58
3	110.41
4	108.16
5	106.42

Reducing to 4 teams is expected to give a 1.7 point average improvement in team performance, all other things being equal. This is quite consistent with the 1.4 point difference seen in the discussion of the previous chart.

1.7 and 1.4 points per game do not sound very significant, but they are possibly slightly more significant than they sound. Accumulated consistently over a season differences like this are likely to give an average ranking improvement of one position across all Australian teams in an 18 team league. These numbers are quite consistent with the purple 7.61 (5 team) and 7.18 (4 team) figures in the ARU corrected chart above, which are ranking figures adjusted to be equivalent rankings for a 12 team league.

To achieve this improvement, it is necessary to keep all of the top 80% of players from five teams to make up the 4 teams, while removing the 20% least useful players. The saving in player cost would be approximately \$3 million, rather than \$5 million if a whole team was discarded. The salary caps of the remaining 4 teams would need to increase to \$5.5 million.

Bringing a number of players back from Europe (perhaps using money provided by Andrew Forrest) would likely make a greater improvement across 5 teams. Normal year to year fluctuations are much larger, and many other factors such as coaching, and even luck with injuries or player groups happening to go well together probably make more difference than concentrating talent. With one less team there is less chance that one of them will have a good year, and less chance one of them will win Super Rugby.

16 Team Competitions

When questions were put to the ARU by media in relation to Andrew Forrest's offer to provide the ARU with a significant financial contribution, ARU representatives made statements about the difficulties of a 16 team competition, and the additional travel costs. In fact, a 16 team competition can function with three groups in a very similar fashion to the 15 team competition structure as used by Super Rugby. Teams in two groups of 5 and one group of 6 can play each other in a very similar fashion – non-Australian teams would still play 8 games within their group and 4 with each of the other groups. With 16 teams there is an advantage in flexibility of scheduling byes, because there is an even number of teams and so all teams can play on any particular week, whereas with 15 teams, at least one team needs to have a bye each week. Otherwise from a travel and scheduling point of view, the competition works almost the same.

Many sports leagues in Australia use a modified round robin system, rather than a pure round robin. Simply modifying two or three rounds for each team in a 16 team round robin league can result in a similar amount of travel and out-of-time-zone matches as for the 3 groups of 5 league structure. Given that modifying round robin leagues to suit season length and derby requirements is common in other sports in Australia, you would have expected that this type of league structure would have been evaluated by SANZAAR. There are probably other practical ways of running a 16 team Super Rugby competition.

Conclusion

It appears that Australian rugby has found itself in decline financially due largely to SANZAAR not following standard league management practices in terms of governance and equalisation measures. The two main competitions that Australian rugby depends on for financing (the Rugby Championship and Super Rugby) are not governed according to common good practices (non-partisan board).

Andrew Forrest offered to solve Australian Rugby's financial problems for several years at least while keeping 5 teams. The above analysis shows that neither competition scheduling, nor concentration of talent are significant factors.

The remaining ARU claim is that several days after the final court decision was simply too late. Too late for what exactly? What had been done that was impractical to undo?