**Abstract**

Although sport broadcasting has received a considerable amount of academic attention, how sport content is valued and monetised from a broadcaster perspective remains relatively underdeveloped. This article adopts multisided market theory to test the broadcast value of Australia’s two most valuable sport media properties, the Australian Football League and National Rugby League. To do so, a content and ratings analysis was performed to quantify the interaction between content and viewership within broadcasts. The article concludes that innate game dynamics have a significant bearing on the value generated for broadcasters from sport content. Advertising aired during intermissions generated audiences 23% smaller than advertising within the match itself. Notably, the National Rugby League’s most valuable timeslot was a delayed telecast, which although potentially reducing the audience size, allowed for an increase in the concentration of advertising within the telecast.

**Quantifying the Value of Sport Broadcast Rights**

1. **Introduction**

Given the dramatic growth in the valuations placed on sport content and the evolving diversity of broadcast media, effective management of sports rights is an increasingly central strategic issue within sport management ([Turner, 2007](#_ENREF_38)). Growth in the value of sports rights has also been a catalyst for a surge in scholarship surrounding broadcast rights (Gratton and Solberg, 2007). To date, there appears to be a consensus that the demand for sports media rights is largely contingent upon the size and demographic characteristics of the potential audience (Solberg and Gratton, 2000). Correspondingly, a large number of demand studies has, therefore, focused on understanding the drivers of potential audience size ([Buraimo and Simmons, 2009](#_ENREF_6); [Johnsen and Solvoll, 2007](#_ENREF_21); [Tainsky and McEvoy, 2012](#_ENREF_37); [Tainsky et al., 2014](#_ENREF_36); [Alavy et al., 2010](#_ENREF_1)).

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However, given that free-to-air (FTA) commercial broadcasters primarily generate their financial return via the advertising component of sport telecasts (and public broadcasters to varying degrees), the emphasis placed on audience demand modelling explores only one element in the valuation of sports rights. As noted by Solberg and Hammervold ([2004](#_ENREF_34)): ‘It is important to bear in mind that [advertising] income corresponds with the ratings figures during the commercials, not during the programs themselves. Thus, it is necessary to estimate the correlations between the ratings figures during the core program and the commercials’ (p. 86). Yet, few models or theoretical frameworks have been developed or have attempted to quantify the role of game dynamics in shaping advertising opportunities as an underlying driver in the financial value of sports leagues ([Dietl and Hasan, 2007](#_ENREF_11); [Késenne, 2014](#_ENREF_22)). The research addresses this significant gap by introducing multisided market (MSM) theory as an approach to evaluating the relationship between sport audience and advertisers, focussed specially in FTA broadcast markets ([Schmalensee and Evans, 2007](#_ENREF_32)).

This article is (we need this sentence to link better to the one above) concerned with analysis and comparison of the broadcast structure of Australia’s two largest commercial sports, the Australian Football League (AFL) and the National Rugby League (NRL). The central objective of the paper is therefore to quantify and to compare the broadcast composition of Australia’s most valuable sporting broadcast properties. This objective is achieved by analysing the broadcast structure of each organisation through the synchronisation of minute-by-minute television ratings data with a corresponding broadcast content analysis for a select sample of matches during the 2012 competition season. Specifically, the research is focused on assessing the structure of content in respect to the concentration of advertising within broadcasts, the distribution of advertising and content within broadcasts, as well as intra-broadcast ratings fluctuation.

1. **Literature Review**

Sport displays unique characteristics that make it specifically desirable to broadcasters. Notably, sport content not only generates improved advertising revenue and subscriber rates via its appeal among lucrative demographics, but it can also provide positive spill-over effects for a broadcaster’s brand and other programming ([Hoehn and Lancefield, 2003](#_ENREF_18)). Additionally, the commitment of sports fans to their team and sport provides broadcasters with a relatively loyal audience in an era where new technologies and platforms are exacerbating audience fragmentation ([Szymanski, 2006](#_ENREF_35)). Sport has been shown to be not only robust to fragmentation, but adaptive to new audience cultures and forms of consumption ([McCosker and Dodd, 2013](#_ENREF_23)). In 2015, sports programming accounted for 1.4% of US television programming but represented 49.7% of Twitter TV activity ([Nielsen, 2016b](#_ENREF_26)). The growing intersection between social and sport media was made further apparent in 2016, when the National Football League (NFL) announced that it had partnered with Twitter to stream 10 Thursday night football games ([National Football League, 2016](#_ENREF_24)). Such arrangements reflect the changing patterns sport and media consumption more broadly. Hutchins ([2014](#_ENREF_19)) has noted that the rise of mobile technology has not only led to ‘on the go’ consumption of sport media but it has also facilitated the development of multi-screen behaviour. Nielsen ([2016a](#_ENREF_25)) noted that in 2016, 76% of Australians aged 16 and over had multi-screened while 90% of consumers aged 16-34 had also done so. Notably, the average Australian home now features 6.4 screens, one screen more than had been the case in 2012 ([Nielsen, 2016a](#_ENREF_25))

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The final desirable characteristic of sport content relates to its live and perishable nature, which provides resistance to the practice of digital recording, thus protecting against consumers fast-forwarding through content in order to avoid advertisements. According to Deninger ([2012](#_ENREF_10)), 90% of viewers who watch a sport broadcast will do so live. The need to telecast live, however, has also brought about challenges and in response, it has been sport that has historically adapted to the needs of broadcasters. Rowe ([1996](#_ENREF_30)) noted that broadcasters progressively pressured sport into modification, resulting in rule adaptation, television-friendly schedules, and restrictions on overtime. Such modification has seen sport shift from a traditional spectator-based model into a global media model termed ‘Media-Corporations-Merchandising-Markets’ (Andreff and Staudohar, 2000). As noted by Evens, Iosifidis and Smith; ‘Fuelled by technological developments in broadcasting and communications more generally, this repackaging of sport as a commodity has expanded into a global business that effectively functions as a specialised division of the entertainment industry’ ([2013: 13](#_ENREF_12)).

The exact financial value of sports rights is determined by a combination of micro and macro factors, as well as by unique sport-specific considerations. According to Gratton and Solberg ([2007](#_ENREF_16)), such determinants include the size and purchasing power of the population, the popularity of the sport among the general audience, the level of competition on the supply side as well as the demand side, and the clarity of juridical ownership. An additional factor that shapes the value of sport relates to legislative regulation. Australia maintains among the world’s most stringent controls (known as ‘anti-siphoning’) over sport content, dictating which events must be shown on FTA television ([Rowe and Gilmour, 2009](#_ENREF_31)). Given that Australia’s largest sport properties are constrained to a large degree when appearing on FTA television, they must take a particular interest in understanding how to economically maximise the value of such rights.

From an economic viewpoint, one of the few proposed sport broadcast valuation models is that of Noll ([2007](#_ENREF_27)). Noll’s research suggests that for advertising-supported programs such as FTA and public television, revenue is determined ‘by the size of the audience and its distribution across demographic categories’ (p. 404). This definition, however, largely disregards the role of the content and advertising in shaping rights fees, which appears potentially vital in driving sport broadcast valuation ([Solberg and Hammervold, 2004](#_ENREF_34)). Unlike pre-recorded programming that carries a planned concentration and schedule of commercials, sport broadcasting contains variability in terms of the volume and timing of advertising presented and must be telecast live or near live to maximise ratings ([Gaustad, 2000](#_ENREF_15); [Cowie and Williams, 1997](#_ENREF_9)). Cricket, for example, provides strong television content due to the regular intermissions inherent to the sport ([Whannel, 2000](#_ENREF_39)). In contrast, soccer, due to its fluid pace, does not create opportunities for in-game advertising breaks, restricting advertising segments to intermissions during which time the audience diminishes significantly ([Késenne, 2014](#_ENREF_22)). Further complications arise when considering other match dynamics. The duration of a cricket (or tennis, volleyball) match is contingent on the competitors, whereas football telecasts are guaranteed a minimum duration irrespective of weather and score progression. Yet, the role of advertising concentration in sports value has been scarcely considered within existing modelling literature. In observing significant differences in the sport broadcasting market structures of North America and Europe, Dietl and Hasan (2007) noted:

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A soccer match consists of two respectively uninterrupted halves of 45 minutes which are separated by a 15 minute half-time break. This half-time break thus is the primary interval in which networks are able to air commercials without causing very high disutility for viewers. The North American Major League sports however, are interrupted significantly more often . . . adding to a total potential commercial time significantly exceeding the 15 minutes in soccer. (p. 416)

This shortcoming is overcome through the theoretical identification that media products are multisided ([Anderson and Gabszewicz, 2006](#_ENREF_2)). An industry is characterised as multisided when a supplier serves distinct customer groups. This is in contrast to one-sided markets where there is a homogeneous group of customers and transaction volume holds a relatively linear relationship to price charged. Schmalensee and Evans ([2007](#_ENREF_32)) observe three criteria that characterise MSM:

* The existence of at least two distinct customer groups
* An indirect connection between these groups by indirect network effects (externalities),
* Difficulty in sufficiently internalising externalities

Media products are multisided by nature because broadcasters serve two distinct customer groups: viewers and advertisers ([Budzinski and Satzer, 2011](#_ENREF_5)). Each stakeholder however, has divergent objectives. Viewers make a discrete choice of which station to watch, that maximises their utility according to their preferences. Importantly, viewers are assumed to be averse to watching advertising (a disutility) with few exceptions such as the Super Bowl. Advertisers endeavour to reach a target market to shift demand for their product. Broadcasters attempt to reach equilibrium between these two participants, in turn maximising their financial return. Reaching this equilibrium is a particular challenge for FTA broadcasters as they have greater control over a viewer’s ability to consume advertising. Unlike print media, where a consumer can easily bypass advertising, FTA broadcasters have the ability to control both the dispersion and concentration (within legislative parameters) of advertising ([Anderson and Gabszewicz, 2006](#_ENREF_2)). Notably, the sport industry is itself a MSM and, therefore, sport broadcasts represent a rare intersection between two multisided products ([Budzinski and Satzer, 2011](#_ENREF_5)). Given that sport content by its nature contains considerable variability, the scheduling of advertising within this form of content poses a particularly distinct challenge to FTA broadcasters and is thus the core challenge addressed in this research.

1. **Method**
   1. *Study background*

*3.1.1 Contextual Setting*

The Australian football landscape is underpinned by a long standing cultural phenomenon known as the ‘Barassi Line’, a metaphoric demarcation of the country’s football preferences ([Hess and Nicholson, 2007](#_ENREF_17)). This line is geographic in nature, with North-East Australia (including the city of Sydney) preferring the Rugby codes while in South-West Australia (including the city of Melbourne) AFL is the dominant code ([Cashman, 2010](#_ENREF_7)). Although many factors have influenced the exact popularity of each code in specific areas, it is apparent that interest in the football codes is still strongly linked to these heartlands (Fujak and Frawley, 2015). Research by Fujak and Frawley (2013) has illustrated that 81% of AFL and 93% of NRL audiences are derived from respective heartland markets found on each side of the Barassi Line.

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The cities of Sydney and Melbourne are particularly notable as they represent two of the world’s most crowded sport markets (Fujak and Frawley, 2016a). In total, 28 top-tier commercial football clubs compete across four football codes within these two cities, each with a population nearing five million residents ([OzTAM, 2016](#_ENREF_29)). The NRL and AFL however maintain commercial dominance in these respective markets. Within the 16 team NRL competition, 9 teams are Sydney based, with the city responsible for 33% of cumulative NRL television viewership ([Fujak and Frawley, 2013](#_ENREF_14)). Within the 18 team AFL competition, 10 are Melbourne based, with the city responsible for 37% of aggregate AFL television viewership ([Fujak and Frawley, 2013](#_ENREF_14)). Given that Sydney and Melbourne cumulatively account for 50% of national advertising spend on FTA television, the popularity of these two codes in these two cities is large contributor to the value of their media broadcast rights ([FreeTV Australia, 2016](#_ENREF_13)). The AFL and NRL respectively hold the two largest media rights deals in Australia, with the AFL signing in 2016 a AUD $2.5 billion six year agreementand the NRL signing in 2016 a AUD $1.8 billion five year agreement..

*3.1.2 Broadcast Setting*

The research adopted a quantitative methodological design utilising television broadcasts and ratings from 20 AFL and NRL matches broadcast on FTA television during the 2012 season. The decision to examine both the AFL and NRL was based on several critical considerations. Firstly, the study was focused on evaluating the broadcast structure of FTA television, of which the AFL and NRL retain the dominant share of coverage, as they are the only football codes televised on FTA on a weekly basis during the timeframe under examination (Frawley and Fujak, 2016b). Secondly, given the parity between the two leagues in terms of their most recent broadcast valuations and market leading positions, this approach best allowed for comparison of commonalities and distinctions between the leagues ([Bryman, 2008](#_ENREF_4)). Additionally, combined analysis of the leagues allows for the opportunity to compare broadcast structure across different timeslots and broadcast types (i.e., live versus delayed broadcasts). Finally, historical fixtures were analysed due to more recent changes in broadcast structure that hamper analysis of more recent seasons. In 2015 the NRL introduced live Sunday afternoon fixtures and in 2016 replaced delayed Friday fixtures with live Thursday fixtures.

*3.2 Data background*

*3.2.1. Television ratings*

The study utilised minute-by-minute ratings data collected by television ratings research organisation OzTAM, who are the sole providers of television ratings information across metropolitan Australia and can, therefore, lay claim to being the central medium by which billions of dollars of television media are bought and sold (Fujak and Frawley, 2013). Given the financial significance of the organisation’s output, OzTAM adopt stringent methodological guidelines in their ratings collection process to achieve timely, valid and representative data. Its methodology is consistent with those utilised in other developed markets across North America and Europe ([OzTAM, 2010](#_ENREF_28)). Minute-by-minute data was utilised as it represents the most granular level of ratings information available.

FTA television ratings within Australia’s five capital cities are particularly important due their financial significance. Metropolitan markets accounted for 79% of the approximate $4 billion expended on FTA advertising in 2015 despite representing 69% of the population ([FreeTV Australia, 2016](#_ENREF_13)). Although subscription platforms also contain advertising, its contribution is secondary to subscription revenue. In their last publicly available financial reporting, Consolidated Media Holdings (2012) reported that subscriptions accounted for 70% of total Fox Sports Australia revenue ($348.8 million). This was followed by advertising (18%) and other revenues (12%).

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*3.2.2 Analysis*

Analysis was limited to a sample of 20 matches played on Friday night and Sunday afternoon, due to the substantive coding depth required. In total, the twenty fixtures contained 56 hours of content that, in turn, created 13,324 units of analysis (15-second intervals). The 20 matches were recorded directly from the live public broadcast, ensuring that coded footage was the same as that seen by home audiences and, specifically, those within the OzTAM sample. Given the popularity of each league in specific local markets, NRL broadcasts were analysed specifically against Sydney television ratings, while AFL broadcasts were analysed against Melbourne television ratings. As Australia’s largest capital cities, Sydney and Melbourne are allocated the largest sample size in measuring television ratings, improving the reliability of the data ([OzTAM, 2016](#_ENREF_29)). To improve sampling validity, a stratified sample was utilised to ensure a fair representation of matches. The selection of fixtures has attempted to control confounding variables within the limitations of empirical observational data. Season is consistent given that all fixtures come from within one season. Furthermore, no fixtures that played on public holidays or that were marquee in nature were included in analysis. The sample is representative across match score line with a balanced distribution between even and more convincing victories.

Recordings of the corresponding fixtures were analysed, coded, and aligned with ratings data. The alignment of ratings with content allows for the standardisation of telecast analysis that facilitates several significant comparisons. Firstly, the analytical method allows for the comparison of structurally variant broadcasts *within* a league. For the purposes of this research, the method allows for the comparison of three NRL broadcast timeslots to determine their relative advertising performance despite differing telecast times, days and structures (live or delayed). The analytical method also allows for comparison *between* the AFL and NRL, despite the leagues having different broadcast durations (3 hours versus 2 hours) and match structures (quarters versus halves).

In order to test the statistical significance of observed relationships, analysis was performed in the R statistical package. To allow for comparison of audience exposure to advertising with programmes across the different timeslots and leagues, a metric titled ‘Ad View Hours’ (AVH) was calculated. The AVH metric is derived by multiplying the audience size against the duration of advertising within each broadcast, therefore accounting for both the concentration of advertising within a program and the size of the audience during such programs. The AVH measure creates a standardised unit, similar in nature to the method historically adopted by the International Olympic Committee (2014) to compare viewerships across Olympics Games. Factors influencing the audience were analysed both in 15-second intervals as well as at an aggregate game audience level using multifactor analysis of variance. The factors considered in this analysis include the timeslot of the game, the code played, the content type being displayed in a given interval, and whether the 6pm news was due to commence within 10 minutes of the measurement.

1. **Results**

*4.1 Comparing NRL broadcast timeslots utilising MSM framework*

Each of the NRL’s three fixture types generated distinctly different audience viewing and advertising concentration distributions. The Friday night live (FNL) fixture generated the strongest average Sydney audience of 437,529 viewers (*n* = 4), considerably more than the Sunday afternoon delayed (SAD) coverage with 290,049 viewers (*n* = 4) and the Friday night delayed (FND) coverage of 208,342 viewers (*n* = 4). However, while FNL was able to generate the strongest average audience, this timeslot was also the weakest for the FTA host broadcaster with reference to advertising concentration. The FNL telecast contains an advertising concentration of 15.6%, significantly lower than SAD (24.8%) and FND telecasts (22.1%).

Minute-by-minute television ratings illustrate that there is also considerable intra-broadcast viewing variance wtihin sport broadcasts. Each fixture type displays a unique ratings pattern, reflecting both the varying timeslots of telecasts and a distinction between live and delayed content. The FNL broadcast viewership is characterised by a double peak and trough pattern whereby there is a significant uplift in viewing for in-game content and noticeable declines during intermissions (see Figure 1). Within the FNL timeslot, in-game content generated an average audience of 470,052, while the intermissions (pre-game, half-time and post-game) recorded an average audience of 355,536 (a 25% reduction in compative ratings).

**INSERT FIGURE 1 HERE**

FND fixtures are characterised by a rapid and progressive decline. At the end of the first half of the delayed match, the audience has declined by 37.4% (214,395) from the first minute of telecast (342,635). By the final minute of the entire telecast at 11:29 pm, the audience has declined 76% (81,599) from the first minute of telecast at 9:31 pm. In contrast, SAD fixtures display a growth trajectory as the broadcast culminates. The last 10 minutes of the broadcast (17:50 to 17:59) recorded a significantly larger average viewership of 396,811 as compared to 281,362 for the first 110 minutes of the telecast (ANOVA, p=0.014) (see 4.1 in Table 1). Given that the broadcaster uses the last minute of the broadcast to select a sponsored ‘man of the match’, this advertising segment is perhaps among the more valuable within their inventory.

Table 1

*Amalgamated Regression Statistical Results of Ratings Analysis*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Estimate | Std. Error | t value | Pr(>|t|) | Pr(>F) |
| **4.1 Intra-broadcast ratings variance (NRL)** |  |  |  |  |  |
| (Intercept) | 261,051 | 3,641 | 71.692 | < 0.001 |  |
| CodeNRL | 3,880 | 5,249 | 0.739 | 0.45976 | 0.45976 |
| Ad.SpaceContent  **7** | 43,121 | 4,004 | 10.769 | < 0.001 | < 0.001 |
| Before News | 15,969 | 6,898 | 2.315 | 0.02063 | 0.02063 |
| CodeNRL:Ad.SpaceContent | 17,804 | 5,840 | 3.048 | 0.00231 | 0.00231 |
|  |  |  |  |  |  |
| **4.2 Broadcast structure and advertising dispersion (NRL)** | |  |  |  |  |  |
| (Intercept) | 191,052 | 3,367 | 56.748 | < 0.001 | < 0.001 |
| Ad.SpaceContent | 22,991 | 3,882 | 5.922 | < 0.001 | < 0.001 |
| Match Type: Friday Live | 178,054 | 5,470 | 32.55 | < 0.001 |  |
| Match Type: Sunday Delay | 85,983 | 4,958 | 17.343 | < 0.001 | < 0.001 |
| Ad.SpaceContent:Match.TypeFriday Live | 63,320 | 6,082 | 10.411 | < 0.001 |  |
| Ad.SpaceContent:Match.TypeSunday Delay | -6,293 | 5,663 | -1.111 | 0.267 |  |
|  |  |  |  |  |  |

Analysis of the timing of advertising content within telecasts illustrates that advertising is not dispersed homogeneously within broadcasts. In FNL fixtures, for instance, 84% of the program’s advertising occurred during intermissions, despite their accounting for only 28% of the telecast time (see Figure 2). Given that intermissions generated reduced ratings compared to in-game content (355,536 versus 470,052), it is therefore of little surprise that ratings achieved for advertising was less than that for content. Overall, audiences for advertising are 18% smaller than for content (369,106 versus 450,153) while the audience for advertising aired during intermissions are 22% smaller compared to those aired within the game when in-play (353,376 vs. 451,689). This decrease in audience during advertising content on timeslot is statistically significant (ANOVA, p<0.0001) (see 4.2 Table 1).

**INSERT FIGURE 2 HERE**

In contrast, the delayed nature of the FND and SAD fixture provides the broadcaster greater flexibility to in-build advertising within content and reduce their reliance on intermissions. Each 40-minute half of football within these two fixtures takes approximately 54 minutes to view, with advertising accounting for the discrepancy. As a result, 74% of advertising within FND fixtures and 81% of advertising during SAD fixtures occurred ingame. Correspondingly, advertising content generated an average rating of 96% of the match average for SAD matches (277,035) and 92% of FND fixtures (191,052).

The SAD fixture appears to be the league’s most valuable timeslot. The SAD telecast generated 121,491 hours of viewed advertising compared to 115,346 hours for FNL and 97,912 hours for FND. Due to a small sample size of aggregated data (n= 4 per fixture type), such a conclusion was unable to be statistically validated (ANOVA, p=0.313) (see Table 2). None the less, there appears to be strong indicative evidence that SAD telecasts provide a good balance between high advertising concentration (via a delayed telecast) and with a reasonably strong core rating (aided by a low small audience decline for advertising content). In contrast, the FNL fixture did not convert its high ratings into advertising, while the FND telecast suffered from lower audiences.

Table 2

*Regression Results of Total AVH*

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | Estimate | Std. Error | | t value | Pr(>|t|) | Pr(>F) |
|  |  |  | |  |  |  |
| (Intercept) | 352,491,319 | 38,235,875 | | 9.219 | < 0.001 |  |
| Match Type: Friday Live | 62,753,213 | 54,073,693 | | 1.161 | 0.276 | 0.313 |
| Match Type: Sunday Delay | 84,877,954 | 54,073,693 | | 1.57 | 0.151 |  |
|  |  | |  |  |  |  |

*4.2 Comparing NRL to AFL broadcast value utilising MSM framework*

*4.2.1 Friday Night Football*

The structure of each league’s Friday night football telecast is summarised in Table 3, with analysis indicating that the AFL is the structurally superior telecast product in the timeslot. Given the AFL’s greater game length, the league is able to deliver a 225-minute broadcast from a single game (including distinctly reported pre and post-game commentary segments), whereas the NRL delivered two games (one live, one delayed) for the duration of 244 minutes. Evidently, AFL broadcasters benefit from structural game elements of the sport which help maximise their ability to monetise content. An average of 28 goals was scored per AFL match within the sample (compared to 7 tries in an NRL match), each providing the potential for a 30-second advertising break. Such breaks are also potentially more amenable to viewers, aware that the game clock stops between scoring and the restart of play. As a result, 26% of advertising within AFL game telecasts happen in-game (compared to only 16% for live Friday games).

Table 3

*Friday Night Football Ratings Analysis by Component*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Broadcast Duration | Broadcast Rating | Content Rating | Adv. Rating | Aud  Disc. | Adv.  Con. | AVH | AVH  P/H |
| AFL |  |  |  |  |  |  |  |  |
| Pre-game | 20 | 295,575 | 294,223 | 299,453 | 1% | 26% | 25,890 | 77,429 |
| Game | 159 | 449,802 | 455,028 | 419,293 | −7% | 15% | 162,476 | 61,312 |
| Post-game | 46 | 211,533 | 210,089 | 216,028 | 2% | 24% | 40,505 | 52,547 |
| **Combined** | **225** | **387,160** | **390,431** | **366,898** | **−5%** | **18%** | **228,871** | **60,948** |
| NRL |  |  |  |  |  |  |  |  |
| FNL game | 120 | 442,313 | 455,417 | 369,106 | −17% | 16% | 115,346 | 57,493 |
| FND game | 124 | 208,342 | 214,043 | 191,052 | −8% | 25% | 97,914 | 47,378 |
| **Combined** | **244** | **323,592** | **332,940** | **278,759** | **−14%** | **20%** | **213,260** | **52,361** |

Aud Disc. = Audience Discount (Content Rating/Adv Rating), Adv. Con.= Advertising Concentration, AVH = Ad View Hours, AVH P/H= Ad Viewer Hours Per Hour

The by-product of greater in-game advertising within AFL broadcasts is that the differential between the average television rating for content and advertising (the “audience discount”) is smaller compared to NRL broadcasts. A broadcaster benefits from content that suffers only a small audience discount as this ensures that their advertisers reach an audience that is close to the reported ‘average’ audience of the entire program. AFL advertising operates on a 7% advertising discount to content for live matches compared to 17% for NRL. Comparing Friday night fixtures, for example, while the AFL and NRL broadcasts record similar overall viewership audiences in their home markets (450,302 vs. 442,313, p-value=0.883), they record significantly different average advertising audiences (392,469 vs. 369,106, p-value<0.0001). Furthermore, on an AVH per hour basis, the AFL outperformed the NRL by 16%.

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*4.2.2 Sunday Afternoon Football*

In contrast to Friday night football, the NRL was able to generate a superior advertising return than the AFL for their host broadcaster in the Sunday afternoon timeslot. The NRL telecast is able to generate a higher AVH in 2 hours of content (121,491) than the AFL’s 3-hour telecast (117,271; see Table 4). The NRL’s superiority reflects that Sunday afternoon matches were broadcast on a one-hour delay, providing the host broadcaster with greater control over advertising dispersion and concentration within the telecast. The NRL also recorded a stronger average television rating for Sunday football, although even with an equal television rating, the NRL would remain the better advertising property on a per hour basis. Another by-product of delayed NRL Sunday afternoon coverage was that the audience discount for advertising content was considerably smaller as compared to the FNL fixture (4% versus 17%).

Table 4

*Sunday Afternoon Football Ratings Analysis by Component*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Broadcast Duration | Broadcast Rating | Content Rating | Adv. Rating | Aud  Disc. | Adv.  Con. | AVH | AVH  P/H |
| AFL | 179 | 224,672 | 228,828 | 206,950 | −8% | 19% | 117,271 | 39,309 |
| NRL | 119 | 290,049 | 293,734 | 277,035 | −4% | 22% | 121,491 | 61,128 |

Aud Disc. = Audience Discount, Adv. Con.= Advertising Concentration, AVH = Ad View Hours, AVH P/H= Ad Viewer Hours Per Hour

1. **Discussion**
   1. *Applying MSM to Sport Broadcasts*

To date, scholarly evaluation of sport broadcasting has been largely oriented towards the audience side of the transaction, with considerably less emphasis on the advertiser component or the interaction between the two ([Solberg and Hammervold, 2004](#_ENREF_34)). Furthermore, while there has been general acknowledgement of the importance of game dynamics shaping broadcast fees, there has been little empirical testing of it to date ([Késenne, 2014](#_ENREF_22); [Dietl and Hasan, 2007](#_ENREF_11)). To address this gap, the application of a relatively new theory was adopted, that of multisided markets. As noted, sport broadcasting potentially provides a special case of MSM due to its intersection of two distinct MSM’s, that being both sport and media ([Budzinski and Satzer, 2011](#_ENREF_5)).

The data, albeit from a small but robust sample, illustrated the potential application of MSM theory in sport broadcast markets. Most notably, the results illustrated a method by which practitioners and academics alike could more effectively evaluate sport content. In particularly, the research expands on Noll’s ([2007](#_ENREF_27)) framework for sports broadcast rights fee evaluation by further defining revenue as a construct driven by two distinct components (advertising concentration and audience size). To facilitate this theoretical development , it was proposed that the audience size be further demarcated between program and advertising content and that the advertising concentration of telecasts be calculated. By multiplying broadcast duration by advertising concentration and average advertising rating, it was possible to derive a figure that reflects a programme’s advertising performance (AVH), thus allowing for comparison of sports.

More broadly, the research also expands our understanding of how consumers actually consume sport broadcasts. Although television ratings are often announced as a single, aggregate average figure when reported in the media, it is evident that there is significant intra-broadcast variance in audience viewership. It was determined that advertising content and intermission content both significantly reduce audience size (consistent with the assumption that advertising causes disutility), consistent with existing findings by Solberg and Hammervold ([2004](#_ENREF_34)), who observed that advertising achieved only an average of 45% of the audience size within European football coverage. The research illustrates that the structural elements and game dynamics of a sport have a significant impact on the ROI that can be achieved by a broadcaster ([Whannel, 2000](#_ENREF_39)). AFL broadcasters benefit from more natural intermissions that allow for natural advertising dispersion, thus mitigating audience leakage during advertising. By comparison, the NRL conforms to the European soccer model identified by Dietl and Hasan ([2007](#_ENREF_11)), in which audiences for advertising diminish considerably due to their concentration during intermissions.

* 1. *NRL shift to live Sunday football*

Significantly, utilising consumer revealed preferences (through television ratings) via the adoption of a MSM framework can also have implications for how sports modify their sport to maximise broadcast value ([Rowe, 1996](#_ENREF_30)). In 2014, the NRL announced a change in structure for Sunday afternoon football, resulting in the telecast being broadcast live rather than on a one-hour delay. Given that this research identified this delay as key to the timeslot achieving the strongest ROI of the league’s three timeslots, the impact of live telecasting can be hypothesised through the MSM framework. The new live structure is likely to result in a decline in advertising concentration consistent with FNL telecasts (from 22% to 16%), as well as a greater audience discount for advertising content (from 4% to 17%). With these factors in mind, the average broadcast rating would need to increase 62% from 290,049 to 470,903 to offset the loss associated with the other calculation elements. This would seem to be an unlikely proposition as it would result in the host broadcaster losing value from the change in structure.

1. **Conclusion**

In this study multisided market theory was empirically applied to Australia’s two largest sport broadcasting properties and Noll’s (2007) conceptual framework for FTA sport broadcast rights valuation was expanded upon. The analysis illustrated that cumulative television ratings alone do not provide a complete or accurate portrayal of the value generated for respective broadcasters. This determination was best typified within the NRL, for which it was found that the delayed Sunday afternoon fixture was the most valuable broadcaster timeslot despite the aggregate program rating being only 66% of the rating for live Friday night football. Overall, however, the AFL was shown to be the structurally superior live broadcast property, being capable of inserting a greater proportion of advertising within match content as well as having more intermission time in which to place advertising blocks.

Despite the advancements offered by the expanded framework, it is not without limitations. The framework currently measures value in units of advertising exposure generated, thus only allowing for comparison between timeslots and sports in relative terms. Taking into account television advertising rates are needed to develop the framework and provide an avenue of further research. Furthermore, the study was limited in sample size, prohibiting some statistical validation. Nonetheless, this research represents one of the first attempts to empirically apply MSM theory within a sport context and, therefore, provides an advancement of scholarly understanding of sport broadcast viewing behaviour and economic value.

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