

Chapter X

Participation Legacy and International Sport Events hosted in Australia

Stephen Frawley and David Bond

Introduction

Participating in sport is viewed as an important aspect of social life for numerous cultures around the world. For many nations, such as Australia, the central mode for participating in sport is through the local club system (Cashman, 2010). The benefits of the club system are that it provides the members of the club with regular and structured sport competition (Vamplew & Stoddart, 1994). Playing sport and being a member of a club also provides participants with various physical and mental health benefits (Steptoe & Butler, 1996). Given the range of positive features associated with playing sport for all-ages, governments have been increasingly advocating for boosting the number of participants that play sport in their communities. A consequence of this policy approach has led to many governments promoting the hosting of international sport events as one significant way to foster and promote sport participation and physical activity (Veal, Toohey, & Frawley, 2019).

Through the staging of international sport events, whether that is sport mega-events (i.e. the Olympic Games or Football World Cup) or world championship events (i.e. the Rugby World Cup), host governments will often increase (sometimes significantly) their sport funding programmes in the lead up period to the event (Frawley & Adair, 2013, 2014; Frawley, 2013a, 2017). A key objective of host governments has been to build both political and social capital within their communities (Kassens-Noor & Lauermann, 2017). Given the massive amounts of public funds expended by governments hosting international sport events it is critical that sport researchers explore the positive and negative impacts that they generate for host communities (Stewart & Rayner, 2016).

The purpose of this chapter is to examine the participation legacy of hosting international events in Australia, drawing on the 2003 Rugby World Cup as the main case study. The chapter draws on a variety of data sources including rugby registration data

collected by state and national rugby federations and interview data with senior rugby development managers. The chapter is divided into two main sections. Following the introduction, the chapter examines the relevant literature that has explored sport participation legacy in Australia, with a specific focus on the Sydney 2000 Olympic Games. Following this review, the case of the 2003 Rugby World Cup is presented.

Sport participation legacy in Australia

A central policy feature for hosting international sport events for many modern governments has been the thought that such events will motivate their populations to be more active and to play sport more often (Veal, Toohey, & Frawley, 2019). The term often used to describe this process is the ‘trickle-down effect’ (Veal, Toohey, & Frawley, 2012; Frawley, 2013b). The trickle-down effect (also at times referred to as the ‘demonstration effect’) is where mass sport participation is assumed to be created due to the increased media coverage that derives from the staging of mega-events (such as the Olympic Games or Football World Cup) or international sport events (Reis, Frawley, Hodgetts, Thomson, & Hughes, 2017).

Policy makers from various countries around the world, over the past 50 years or so, have been influenced by this type of thinking (Veal et al., 2019). For example, the Australian Government, released a report into the national sport system in the early 1970s that stated: “the focus should not be on the number of gold medals our competitors can win, but rather on the inspiration and impetus their success gives to the citizens of our nation for mass participation in physical activity in all age groups and at all levels of ability” (Bloomfield, 1973, p. 3-4). A further report, also by the Australian Government, just two years later, supported a top-down approach to sport development, referring to the idea of a sporting pyramid. The idea of the pyramid “shape demonstrates that the high-performance apex expands as the base broadens; and it allows for the view that the better the standard of

performance at the top, the more it can serve to inspire and encourage participation at lower levels” (Coles, 1975, p. 14).

Sport policy in Australia since the early 1970s has been shaped by the findings of these two reports that focused sport funding on the elite end of the sporting pyramid (Veal et al., 2019). The political rationale behind this level of expenditure has been that spending resources at the top level of elite sport will at some point trickle-down to the community or grass roots level (Hogan & Norton, 2000; Misener, Taks, Chalip, & Green, 2015). Furthermore, politicians get to ‘bask in the reflected glory’, when their national teams or nations athletes win Olympic medals and world championships (Cashman, 2006).

One of the first and most important studies to debunk the trickle-down effect was conducted by Hogan and Norton (2000) around the time of the Sydney 2000 Olympic and Paralympic Games. Their study, titled, *The Price of Olympic Gold*, provided evidence that through the years 1976-2000, the Australian Government spent close to \$1.4 billion on sport and recreation funding (all financial amounts in this paper are in Australian dollars). Of this total amount, approximately 15% was spent on grassroots sport while the remaining 85% was spent on elite high-performance sport. Hogan and Norton (2000), in addition to examining the financial expenditure explored the performance of the national team at the Olympic Games during the 1980-1996 period. They found that over this time period the Australian Olympic Team won a total of 173 Olympic medals.

Despite this level of outstanding sporting success over the same time period there was no clear evidence that the trickle-down effect had taken place in Australia across the general population. Perversely what Hogan and Norton (2000) found was sedentary levels among the Australian adult population had actually increased. For instance, when comparing obesity levels across 1980-1996, for males, the proportion of the population that was classified as

obese changed from 7.8% to 17.6%. As Hogan and Norton (2000) concluded in their study, based on the evidence they collected, it was time to revisit the notion of the trickle-down effect.

In addition to the work of Hogan and Norton (2000), three of the earliest studies to explore the notion of a trickle-down effect in the context of the Olympic Games (while having many limitations such as small data-sets) were important for providing sport management researchers with inspiration for the conduct of future larger studies. The first by Sust (1995) explored the impact of a junior sport development programme that was delivered as part of the preparations for the Barcelona 1992 Olympic Games. The study found that the junior program did have a positive impact on sport participation. The sample however used in the study was very small and therefore the findings need to be treated with a great deal of caution. The second study conducted by Truno (1995) sought to understand how sport participation changed in Spain across the years, 1989 to 1995. The main finding to come out of this study was the increase in sport participation for women in Spain, with participation increasing from 35% in 1989 to 45% in 1995. The third study by Hindson, Gidlow and Peebles (1994) examined the impact media exposure of the Barcelona 1992 Olympic Games and the Albertville 1992 Winter Olympic Games had on sport participation through the New Zealand sport system. Sport clubs in the Canterbury district of New Zealand took part in a survey in addition to a survey of national sport federations. The results from the two surveys found that participation levels remained stable post-event with no significant increase in participation.

Following on from these two studies discussed above (Sust, 1995; Truno, 1995; Hindson et al., 1994), and the Hogan and Norton (2000) study, the Australian Centre for Olympic Studies based at the University of Technology Sydney started a two decade long project exploring the sport participation legacy of the Sydney 2000 Olympic and Paralympic

Games as well as other international events hosted in Australia post 2000. The following section of this chapter explores the research conducted on Sydney 2000.

Sydney 2000

Unlike more recent examples (i.e. London 2012), the bid to host the Sydney 2000 Olympic Games did not place much emphasis on creating a sport participation legacy. Rather, the focus was on two key areas, staging a ‘green’ Games and secondly on hosting an event that was focused on the athletes (Sydney 2000 Olympic Bid Limited, 1993). The focus on the athletes was to provide the best facilities and conditions so that the athletes from around the world could perform at the highest possible level (Frawley & Toohey, 2009; Frawley, 2013b, 2015). Thus, the focus for sport was at the elite level and not necessarily at the grassroots. When Sydney won the bid to host the Games in September 1993 over the next seven years funding for elite sport grew dramatically while the resourcing of grassroots sport stagnated (Stewart et al., 2004).

After the bid phase, two reports were completed that demonstrated that sport participation was not a central priority for any of the key stakeholders involved in the Games, including the organizing committee, the state and national governments and the national sport federations (Veal et al., 2012, 2019). For example, the large accounting firm, KPMG (1993), in their report discussed the economic potential of the Games and the benefits of new sport facilities but said little about the health, social or community sport impacts that might be derived. A second report by management consultants, Keys Young (1995), discussed the benefits of hosting the Games but again little attention was paid to sport participation. The report mentioned the benefits of conducting a full social impact study on the Sydney 2000 Olympic Games, but this study was never conducted (Veal et al., 2012).

An earlier report that was published in 1990, prior to the bid and compiled by a standing committee within the New South Wales Parliament (the host state for the Sydney Games). The report to the New South Wales Premier (Sydney Olympic Games Review Committee, 1990) did briefly mention the aspiration to see a boost in community sport participation as an outcome of staging the Sydney Games, but without providing any detail on how it actually could be achieved. The report stated:

An Olympic Games that is successfully staged and financially managed leaves a positive legacy for the host city in terms of new and upgraded sporting facilities and venues; new and improved infrastructure; enhanced international recognition; increased tourism; new trade, investment and marketing opportunities, and increased participation in sport. (Sydney Olympic Games Review Committee, 1990, p. 3)

A range of studies have been published since the completion of the Sydney Games that examined sport participation impacts, trends and legacies. These studies can be divided into two sub-groups. First, research that investigated shorter-term trends and secondly those that examined medium-term impacts. The Australian Sports Commission (2001) study was one of the first to be published and investigated data collected by the Australian Bureau of Statistics (ABS), between 1998 and 2000. This study found that sport participation levels in Australia decreased across the examined period. The report concluded there was no evidence of a trickle-down effect due to the hosting of the Sydney Olympics.

Research conducted by ABS researchers, Van den Heuvel and Conolly (2001), based on ABS quarterly data, also found that a decrease in sport participation was witnessed between 1998 and up to the middle of 2000. The authors however did state that this decrease did reverse between, August 2000 and November 2000, suggesting a minor trickle-down effect. This particular finding though was disputed by Bauman, Bellew, and Craig (2015).

Their study could not find any increase in adult physical activity in the immediate period after the Sydney Olympics.

Studies that examined the medium-term impacts of the Sydney Olympics also offer mixed findings into the relationship between the staging of an Olympic Games and the sport participation legacy for host communities. For example, Veal et al. (2012), using data collected over a ten-year period by the ASC and the ABS, showed that there potentially was a positive impact on sport participation for people aged 15 and over, however, this was for data from non-Olympic sports. For the 5–14 age category, Olympic sports had a more positive impact, leading tentative support to the notion that the Olympic Games may have had a trickle-down effect on Australian youth. The above findings need to be treated with caution though because of changes that were undertaken to the survey design for the ASC adult sport participation survey and changes to the data collection timing for the ABS children's sport survey (Veal et al., 2012).

Analysis of national registration data across Olympic sports, between 1996 and 2004, showed little overall growth. Two of the bigger sports such as athletics and swimming presented a mixed picture (Frawley, Toohey, & Veal, 2013). For athletics, whilst there was an increase in junior registrations the year following the Sydney Olympics, a great deal of this growth was then lost in the years after. For a sport such as swimming, which was the most successful in terms of medals won at Sydney 2000, registrations actually decreased by 5% (Frawley, Toohey, & Veal, 2013).

In summary when looking at all the studies completed on the Sydney 2000 Olympic Games there is no evidence to suggest that a trickle-down effect occurred. While some sports noticed small increases the year after the Games, especially at the junior level, in most instances this was not sustained over the medium term. As outlined by Veal et al. (2012,

2019), the status of Australia as a sporting nation is largely based on elite performance not necessarily on the moderate rates of sport participation found across the community. We now move on to explore the 2003 Rugby World Cup.

2003 Rugby World Cup

The hosting of the 2003 Rugby World Cup in Australia, following on so closely to the staging of the Sydney 2000 Olympic and Paralympic Games, provided a great opportunity for sport management researchers to continue examining how such large events impact the relevant host communities. The Rugby World Cup, as an event, has grown significantly since it was first staged in Australia in 1987 (Donohoe & Porter, 2003). Whilst not as large as the Olympic Games or the Football World Cup the size of the event is still substantial given that just under 1.9 million tickets were sold, for the 48 matches that were played across Australia, for the 2003 event (ARU, 2004; URS, 2004). The following case study starts by discussing the interview data collected in the earlier 2003 Rugby World Cup study by Frawley and Cush (2011). It then presents a new expanded dataset that includes an analysis of rugby participation data for the years 2001-2012. Within this analysis, data is analysed on school rugby and women's rugby participation. This is also new data that was not included in the first study completed by Frawley and Cush (2011).

Senior managers responsible for the development of rugby at the state rugby unions and the national union (ARU) were interviewed in 2005 (Frawley & Cush, 2011). The purpose of the interviews was to examine the impact hosting the 2003 Rugby World Cup had on rugby participation, especially the change in rugby registration in 2004, the first season to be played after the event was staged. The collected interview data suggested that 2003 Rugby World Cup increased the profile of the sport within Australia. This was especially the case in the non-rugby parts of Australia (i.e. non-heartland areas) such as the states that are

historically associated with the sport of Australian Rules Football i.e. South Australia, Tasmania, Victoria and Western Australia. While the increased profile of rugby was outlined as being very important so to were the development programmes that were put in place by the ARU in the lead up to the event. Based on the analysis of the collected interview data four central themes emerged (Frawley & Cush, 2011). These included: the importance of development programmes; the impact of funding; the profile generated for rugby by the event; and, the consequences of event timing. These four themes will now be discussed in more detail.

Rugby registrations increased across the years 2003 to 2004 for both junior (under 18) and senior (over 18) categories. The growth for the junior category was more significant however when compared to the senior category. Junior rugby registrations increased by 20% for this period while senior registrations were a touch over 5%. One of the main reasons outlined for this in the interview data was the ARU focus on delivering junior rugby development programmes. Specifically, a very successful school-based programme the ARU developed called EdRugby, was designed to bring the sport to children who may have not had a great deal of awareness or knowledge of the sport. In 2004, EdRugby won the Australian Sports Commission award for developing a school-based programme that was fun, safe and had a positive impact on young people (ARU, 2005).

The financial and commercial growth of rugby was an important aspect noted by a number of those interviewed for the study. The commercial growth of the sport had been particularly swift from the mid 1990s when the game officially changed its status from being amateur to professional. A clear example of this growth was the \$45 million profit the ARU made from the staging of the 2003 Rugby World Cup, with a large percentage of this coming from the sale of broadcast rights (O'Neill, 2007). A part of this commercial 'windfall' was provided to the state rugby federations so they could employ additional rugby development

officers. As one of the ARU senior managers interviewed for the study noted: “in many respects our success in community rugby is measured by participation numbers ... the 2003 Rugby World Cup enable us to increase our resources and programs”. The economic success of the 2003 Rugby World Cup in staging matches in non-traditional states such as South Australia led to state governments investing significantly in the sport (Frawley & Cush, 2011).

The interview data highlighted the importance of the amount of exposure the sport of rugby was able to achieve through the media as a result of hosting the 2003 Rugby World Cup in Australia. It was stated that the event created interest in the broader community not just the rugby community. As outlined by a senior manager, the event “increased the awareness of rugby amongst the young and non-traditional demographics.” While another rugby development manager stated that especially for “younger players it is great to identify with the heroes of rugby” and that having access to high profile players out in the community more often than normal “assists in the public interest factor and people go searching for the rugby experience”.

The final theme to emerge from the interview data related to the scheduling of the event. Staging the event after the traditional rugby season rather than during it provided advantages for promoting the sport for the 2004 season. It was stated by an interviewee that having the 2003 Rugby World Cup start in October and then finish in November linked very well with the rugby development programmes that are delivered in schools and the general community. For instance, the interview respondents noted many of the school-based development programmes are held later in the year which matched the event well, in terms of awareness and publicity. Furthermore, the timing of the event worked well with the start of the 2004 professional rugby season, specifically the Super Rugby competition that starts each year in late February. As outlined by a senior rugby manager: “it was the perfect build up and

timing. The hype that led up to the World Cup was enormous. The regular rugby [season] and other codes had finished, which left the sole focus on the World Cup”.

Participation Data

Drawing on publicly available data from the Australian Rugby Union (now called Rugby Australia) annual reports from 2001 to 2012, we are able to identify a number of key participation trends that extends the earlier analysis completed by Frawley and Cush (2011). As the 2003 Rugby World Cup was held across the months of October and November, the 2003 domestic rugby season therefore took place prior to the event, and as such will be counted as the base year. In this analysis we explore four different categories of rugby participation data: seniors; juniors; schools; and women.

Seniors

In 2003, there were 36,946 senior male players in the country (18 years or above), with, unsurprisingly, the vast majority of them in the rugby union heartland states and territories of New South Wales (NSW), Queensland and the smaller jurisdiction known as the Australian Capital Territory (ACT). In 2004, there was a 5.3% increase in senior player registrations in Australia to 36,946. This increase however did not gather momentum and by 2005 the total number of players registered was 36,574, a decline of 372 players from 2003. It was not until 2009, some six years after the RWC, that senior player registrations exceeded the immediate post-RWC level.

Given the geographic dispersion of rugby around Australia, it's useful to assess the participation numbers partitioned into *Heartland* (NSW, Queensland, and ACT) and *Non-Heartland* (Western Australia, Victoria, Northern Territory, Tasmania and South Australia). For those unfamiliar with Australian sport, the northern states historically have been the stronghold regions for the rugby codes (League and Union) while the southern and western

states have played and followed Australian Rules Football. In the season just prior to the RWC, the *Heartland* states had 30,370 senior players, whilst the *Non-Heartland* states had 6,576. The *Heartland* states had a 7.1% increase in player numbers in the year immediately after the RWC, before dropping back to effectively the same level as 2003. *Heartland* player numbers effectively flatlined over the next four years before beginning to grow from 2009.

In contrast to the immediate growth in the *Heartland* states, the *Non-Heartland* states declined 2.8% across 2003-04, and another 4.3% through to 2005. However, from a low of 6,109 players in 2005 (down from 6,576 in 2003), there were 8,594 registered senior players by 2012, representing an increase of 40.7% over the low point in 2005. This increase though is likely not only to be influenced by the hosting of the RWC but also due to the growth in the professional Super Rugby competition with the inclusion of new teams in *Non-Heartland* regions including the Western Force (in 2005, based in Perth) and the Melbourne Rebels (in 2010, based in Melbourne).

[Insert Table 1 and Figure 1 here]

Juniors

Moving to the junior category of rugby players (for boys under the age of 18). In 2003, there were 32,817 junior players in Australia, and similarly with the distribution of senior players, the majority of junior players were found in the *Heartland* states. In 2004, there was a 20.1% increase in junior player numbers in the country to 39,406 registrations. However, whereas the senior player numbers then went into decline, this was not the case for juniors rugby registrations. The increases in 2005 and 2006 were still strong at 5.4% and 6.5% respectively, before slowly reducing across the years 2007, 2008 and 2009.

When partitioning by geographic region, two points can be made. The first is that the general national trend is mirrored when comparing *Heartland* and *Non-Heartland* regions, and this is evident in Figure 2. The second is that the growth in the *Heartland* states is substantially overshadowed by that of the *Non-Heartland* geographic areas. In the immediate year after the RWC, there was an increase of 17.4% of junior players in *Heartland* regions. However, this is in comparison to an increase of 39.4% in *Non-Heartland* areas, a growth rate (admittedly against a much smaller base) more than double that of NSW, Queensland and the ACT. By 2009, there were 7,414 junior players in *Non-Heartland* regions, a growth of 85.6% as compared to the 3,994 players prior to the RWC. This compares to a growth against RWC junior player numbers of 33.5% to 38,489 in *Heartland* regions.

[Insert Table 2 and Figure 2 here]

Schools

The Australian Rugby Union has historically provided separate statistics for school students involved in regular competitions, and for those who are involved in irregular rugby events such as gala days and knockout tournaments. The focus here will be on regular schoolboy competitions. It is also important to note that there is going to be some level of crossover between junior participants and school participants, as it is common for individuals to play both school and junior club rugby in the same season.

In 2003, there were 46,079 school rugby players competing in regular school rugby competitions around Australia. The 2003 RWC did see an immediate increase of 7.4% in school rugby players across the country in 2004. However, and likely concerning for the Australian Rugby Union, not only were these gains lost by 2005, they went backwards. In 2005, there were 7.6% fewer registered school players compared to 2003, and this declined

further to 42,261, or 8.3% less than in 2003. By 2012, the number of school rugby players had still not exceeded that of those playing in 2003.

When partitioned by geographic region, it becomes clear that growth in school rugby stagnated in the *Heartland* states. In 2004, there were 7.1% more registered school players in the *Heartland* regions. This increase did not hold though, and by 2007 there were 15.3% fewer school players. However, it's important to delve deeper into the data as the impact on NSW/ACT was significantly different to that in Queensland. Both NSW/ACT and Queensland witnessed growth in 2004 of approximately 7% from the previous year. However, whilst Queensland extended this growth until 2006, NSW/ACT dropped 8,217 players between 2004 and 2005, to only 15,464 the equivalent of 69.7% of playing numbers in 2003. These losses only began being clawed back in 2009. Even so, by 2012, there was 13.5% fewer school rugby players in NSW than in 2003. The *Non-Heartland* states, in contrast, grew strongly across the time period and ended with total player numbers up 35.0% on pre RWC figures.

[Insert Table 3 and Figure 3 here]

Women

Whilst the 2003 RWC was a male event (the previous women's RWC was held in 2002 in Spain and the following women's event was staged in Canada, in 2006) and that registered women rugby players represent just 0.95% of total players in 2003, the RWC was still a significant event for the sport of rugby in Australia. For instance, there was an increase in women rugby registrations of 22.92%, in 2004. Participation also increased again in 2005 and held steady until 2006, before beginning a consistent decline through to 2012.

[Insert Table 4 and Figure 4 here]

Discussion and Conclusion

The express purpose of this chapter was to examine the participation legacy of hosting international events in Australia. To achieve this particular aim the chapter explored the 2003 Rugby World Cup as the central case study. The chapter presented participation data that was collected from a variety of sources including rugby registration data that is collected annually by state and the national rugby federation/s and interview data with senior rugby development managers.

It is clear from the participation figures across the different groups that there was an initial positive impact on rugby from the hosting of the 2003 RWC. With the exception of *Non-Heartland* senior players, all groups as defined in this chapter witnessed initial increases in participation in 2004. These gains continued for junior rugby players, in both *Heartland* and *Non-Heartland* regions as well as *Non-Heartland* school players right through to 2012. Women and Queensland schools saw the gains hold for a few years before starting to drop away. *Heartland* seniors and NSW/ACT school players saw the gains disappear almost immediately, with school players in NSW/ACT dropping dramatically. The size of the losses in the school market in NSW/ACT would tend to suggest other factors were also at play. These include the aggressive sport development and game expansion activities of the ‘cash rich’ Australian Football League (AFL) and the success of the Sydney AFL team the Sydney Swans. The Sydney Swans were semi-finalists in the AFL in 2004, premiers in 2005 and runners up in 2006.

The 2003 Rugby World Cup case study highlights a number of issues for the analysis of sport participation legacies in Australia. Firstly, most of the analysis of international sport events in Australia have been conducted over a short-term time frame, largely due to the lack of available data. The Australian Rugby Union should be commended for making its

participation data publicly available and for collecting such extensive data for a long period of time now. Given the vast amounts of public money that has been spent on sport in Australia by all levels of government over the past half century it is extraordinary how poor the overall collection has been of sport participation data. Especially leading into the Sydney 2000 Olympic and Paralympic Games the lack of detailed participation data for children aged between 5 and 15 made any informed analysis very difficult. Secondly, and given this lack Australian data for children aged 5 to 15 has meant most of the analysis has taken place on the adult population. This has resulted in a poor understanding of how sport participation trends for children are impacted (or not impacted) by the hosting of international sport events and the success of Australian athletes and teams at these events. Finally, the importance of collecting qualitative data from senior sport development managers and officials that are at the 'coalface' of sport participation should not be underestimated. Too often sport participation analysis has relied on examining the quantitative participation trends without having a nuanced understanding of how organisational strategy and leadership actually impacts longer-term sport participation growth or decline.

References

Australian Rugby Union. (2001). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2002). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2003). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2004). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2005). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2006). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2007). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2008). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2009). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2010). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2011). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Australian Rugby Union. (2012). *Australian Rugby Union Annual Report*. Australian Rugby Union. Sydney, Australia.

Bloomfield, J. (1973). *The Role, Scope and Development of Recreation in Australia*. Australian Government, Canberra.

Cashman, R. (2006). *The bitter-sweet awakening: The legacy of the Sydney 2000 Olympic Games*. Pan Macmillan, London.

Coles, A. (1975). *Report of the Australian Sports Institute Study Group*, Commonwealth Government Department of Tourism and Recreation, Canberra.

Donohoe, M. & Porter, M. (2003). *Rugby World Cup 2003: 'The Best Ever'*, Sydney: IRB Rugby World Cup 2003 Limited, Dublin.

Frawley, S. (2013a). Sport participation legacy and the hosting of mega-sport events. *Exploring the social impacts of events*. New York: Routledge, 97-110.

Frawley, S. (2013b). Organising sport at the Olympic Games: The case of Sydney 2000. *The International Journal of the History of Sport*, 30(5), 527-544.

- Frawley, S. (Ed.). (2017). *Managing Sport Mega-Events*. Routledge, London.
- Frawley, S., & Adair, D. (Eds.). (2013). *Managing the Olympics*. Palgrave Macmillan, London.
- Frawley, S., & Adair, D. (Eds.). (2014). *Managing the Football World Cup*. Palgrave Macmillan, London.
- Frawley, S., & Cush, A. (2011). Major sport events and participation legacy: The case of the 2003 Rugby World Cup. *Managing Leisure*, 16(1), 65-76.
- Frawley, S., & Toohey, K. (2009). The importance of prior knowledge: the Australian Olympic Committee and the Sydney 2000 Olympic Games. *Sport in Society*, 12(7), 947-966.
- Frawley, S., Toohey, K., & Veal, A. J. (2013). Managing sport participation legacy at the Olympic Games. In *Managing the Olympics* (pp. 66-83). Palgrave Macmillan, London.
- Frawley, S., & Veal, A. J. (2009). *'Sport for All' and major sporting events: Trends in sport participation and the Sydney 2000 Olympic Games, the 2003 Rugby World Cup and the Melbourne 2006 Commonwealth Games*. Australian Centre for Olympic Studies, University of Technology Sydney, Australia.
- Hindson, A., B. Gidlow, & Peebles, C. (1994). 'The "trickle-down" Effect of Top-level Sport: Myth or Reality? A Case Study of the Olympics'. *Australian Journal of Leisure and Recreation* 4(1): 16-24.
- Hogan, K., & Norton, K. (2000). The 'Price' of Olympic Gold. *Journal of Science and Medicine in Sport*, 3(2), 203-218.
- Kassens-Noor, E., & Lauermann, J. (2017). How to bid better for the Olympics: A participatory mega-event planning strategy for local legacies. *Journal of the American Planning Association*, 83(4), 335-345.
- Misener, L., Taks, M., Chalip, L., & Green, B. C. (2015). The elusive "trickle-down effect" of sport events: Assumptions and missed opportunities. *Managing Sport and Leisure*, 20(2), 135-156.
- Reis, A. C., Frawley, S., Hodgetts, D., Thomson, A., & Hughes, K. (2017). Sport participation legacy and the Olympic Games: The case of Sydney 2000, London 2012, and Rio 2016. *Event Management*, 21(2), 139-158.
- Stewart, B., Nicholson, M., Smith, A. & Westerbeek, H. (2004). *Australian Sport: Better by Design? The Evolution of Australian Sport Policy*. Routledge, London.
- Steptoe, A., & N. Butler, N. (1996) 'Sports Participation and Emotional Wellbeing in Adolescents'. *The Lancet*, 347, 1789-1792.
- Stewart, A., & Rayner, S. (2016). Planning mega-event legacies: uncomfortable knowledge for host cities. *Planning perspectives*, 31(2), 157-179.
- Sust, F. (1994). 'The Sports Legacy of the Barcelona Games'. In *The Keys to Success: The Social, Sporting, Economic and Communications Impact of Barcelona '92*, ed. M. De

Moragas and M. Botela, 261–5. Barcelona: Centre d'Estudis Olímpics i de l'Esport, Universitat Autònoma de Barcelona.

Sydney 2000 Olympic Bid Limited (1993). *Sydney 2000 Olympic Bid Document*, Sydney.

Truno, E. (1995). "Barcelona: city of sport". In *The Keys to Success: The Social, Sporting, Economic and Communications Impact of Barcelona '92*, Edited by: De Moragas, M. and Botela, M. Barcelona: Centre d'Estudis Olímpics i de l'Esport, Universitat Autònoma de Barcelona.

URS. (2004). *Economic Impact of the Rugby World Cup 2003 on the Australian Economy*. URS, Sydney.

Vamplew, W., and B. Stoddart. *Sport in Australia: A Social History*. Melbourne: Cambridge University Press, 1994.

Veal, A. J., Toohey, K., & Frawley, S. (2012). The sport participation legacy of the Sydney 2000 Olympic Games and other international sporting events hosted in Australia. *Journal of Policy Research in Tourism, Leisure and Events*, 4(2), 155-184.

Veal, A. J., Toohey, K., & Frawley, S. (2019). Sport participation, international sports events and the 'trickle-down effect'. *Journal of Policy Research in Tourism, Leisure and Events*, 11(sup1), s3-s7.

Table 1: Senior Rugby Player Registrations 2001-2012												
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ACT	1892	1778	1745	1858	2986	2912	2975	2827	2960	3097	2955	3048
NSW	17665	20172	20456	21622	18871	18949	18398	18770	19321	19120	18836	19550
QLD	7564	8714	8169	9047	8608	8633	8294	8469	9382	10195	9968	10033
Heartland	27121	30664	30370	32527	30465	30494	29667	30066	31663	32412	31759	32631
WA	2626	2427	2433	2127	2112	2412	2664	2861	3179	3151	3273	3614
VIC	1535	1850	1981	2062	2157	2378	2080	2074	2292	2501	2537	2560
NT	1083	953	846	744	625	645	754	837	895	828	960	922
TAS	567	551	358	411	340	478	444	387	451	439	406	463
SA	835	1096	958	1048	875	871	856	954	900	961	1013	1035
Non-Heartland	6646	6877	6576	6392	6109	6784	6798	7113	7717	7880	8189	8594
National	33767	37541	36946	38919	36574	37278	36370	37179	39380	40292	39948	41225
Heartland	89%	101%	100%	107%	100%	100%	98%	99%	104%	107%	105%	107%
Non-Heartland	101%	105%	100%	97%	93%	103%	103%	108%	117%	120%	125%	131%
National	91%	102%	100%	105%	99%	101%	98%	101%	107%	109%	108%	112%

Table 2 – Junior Rugby Player Registrations 2001-2012

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ACT	2682	3510	3077	3692	4690	4969	5038	4858	4435	4284	4269	4495
NSW	13257	15299	15461	17784	17312	18246	18867	19491	19353	20708	20458	21135
QLD	8630	10228	10285	12363	13482	14233	14194	14162	14701	14936	15202	16593
Heartland	24569	29037	28823	33839	35484	37448	38099	38511	38489	39928	39929	42223
WA	2105	1925	1904	2529	2830	3273	3178	3277	3495	3721	3705	4183
VIC	913	1046	992	1519	1625	1761	1728	1781	1730	1653	1763	1969
NT	614	449	345	487	476	528	613	625	813	786	670	737
TAS	255	273	251	331	314	364	356	394	321	262	263	244
SA	489	495	502	701	804	853	880	1023	1055	1124	1100	1056
Non-Heartland	4376	4188	3994	5567	6049	6779	6755	7100	7414	7546	7501	8189
National	28945	33225	32817	39406	41533	44227	44854	45611	45903	47474	47430	50412
Heartland	85%	101%	100%	117%	123%	130%	132%	134%	134%	139%	139%	146%
Non-Heartland	110%	105%	100%	139%	151%	170%	169%	178%	186%	189%	188%	205%
National	88%	101%	100%	120%	127%	135%	137%	139%	140%	145%	145%	154%

Table 3 – School Rugby Player Registrations 2001-2012

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ACT	1903	2211	2037	950	1161	1041	1169	1180	1040	1220	1100	1040
NSW	18395	19738	20150	22731	14303	15332	13450	17390	17919	17765	18047	18146
QLD	15228	18530	20489	22034	22731	23288	21527	20140	20301	19584	19400	21900
Heartland	35526	40479	42676	45715	38195	39661	36146	38710	39260	38569	38547	41086
WA	1935	2031	1990	2180	2240	2485	3812	4933	2220	2618	2584	2763
VIC	1362	878	1149	1140	1160	1360	1420	1420	1340	1360	1200	1360
NT	92	100	50	203	260	251	135	0	0	0	0	0
TAS	0	0	0	0	330	0	160	0	0	0	84	0
SA	244	224	214	268	369	524	588	487	780	733	1020	472
Non-Heartland	3633	3233	3403	3791	4359	4620	6115	6840	4340	4711	4888	4595
National	39159	43769	46079	49506	42554	44281	42261	45550	43600	43280	43435	45681
Heartland	83%	95%	100%	107%	89%	93%	85%	91%	92%	90%	90%	96%
Non-Heartland	107%	95%	100%	111%	128%	136%	180%	201%	128%	138%	144%	135%
National	85%	95%	100%	107%	92%	96%	92%	99%	95%	94%	94%	99%

Table 4 – Women Rugby Player Registrations 2001-2012

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ACT	100	100	115	162	156	191	175	276	272	165	108	131
NSW	849	575	715	1019	950	783	611	617	522	557	541	524
QLD	350	240	200	188	531	490	495	388	411	240	340	120
Heartland	1299	915	1030	1369	1637	1464	1281	1281	1205	962	989	775
WA	142	145	104	100	116	149	134	115	171	129	147	204
VIC	150	80	88	69	104	134	91	99	144	123	116	122
NT	128	80	60	26	0	0	0	46	18	66	52	12
TAS	62	57	47	49	43	61	66	55	37	29	15	8
SA	85	101	98	141	96	107	68	64	94	116	179	186
Non-Heartland	567	463	397	385	359	451	359	379	464	463	509	532
National	1866	1321	1427	1754	1996	1915	1640	1660	1669	1425	1498	1307
Heartland	126%	89%	100%	133%	159%	142%	124%	124%	117%	93%	96%	75%
Non-Heartland	143%	117%	100%	97%	90%	114%	90%	95%	117%	117%	128%	134%
National	131%	93%	100%	123%	140%	134%	115%	116%	117%	100%	105%	92%

Figure 1 - Seniors

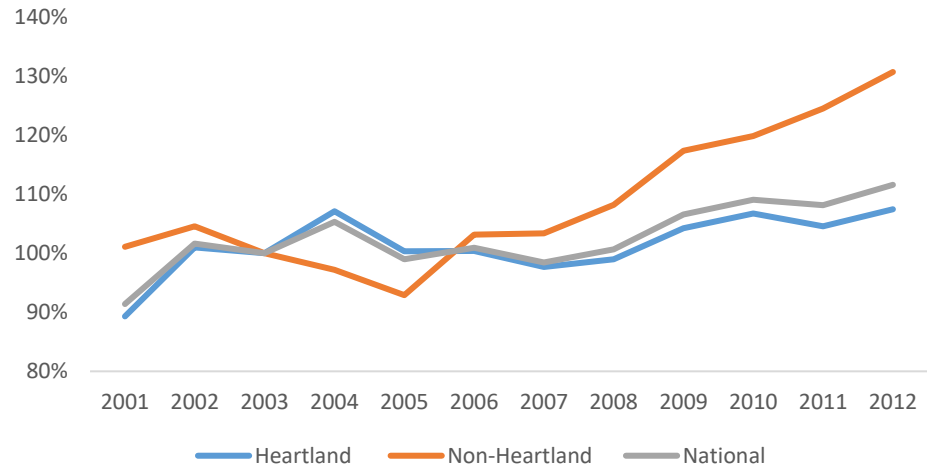


Figure 2 - Juniors

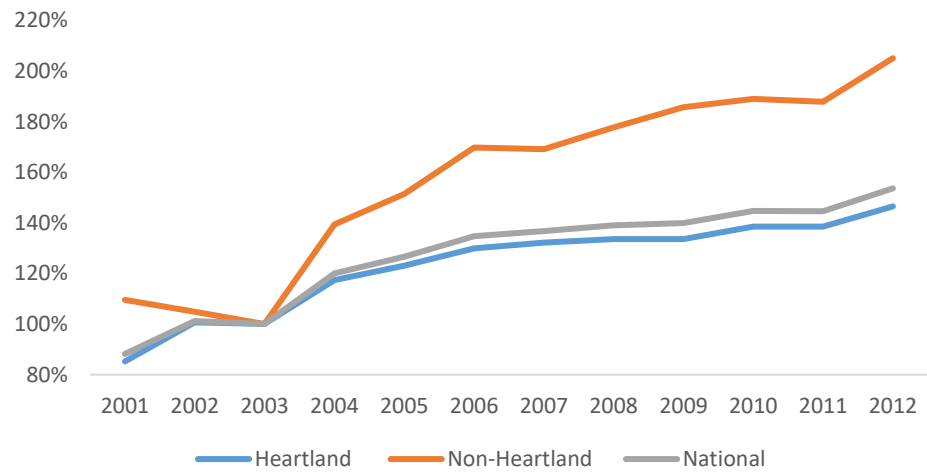


Figure 3 - Schools(1)

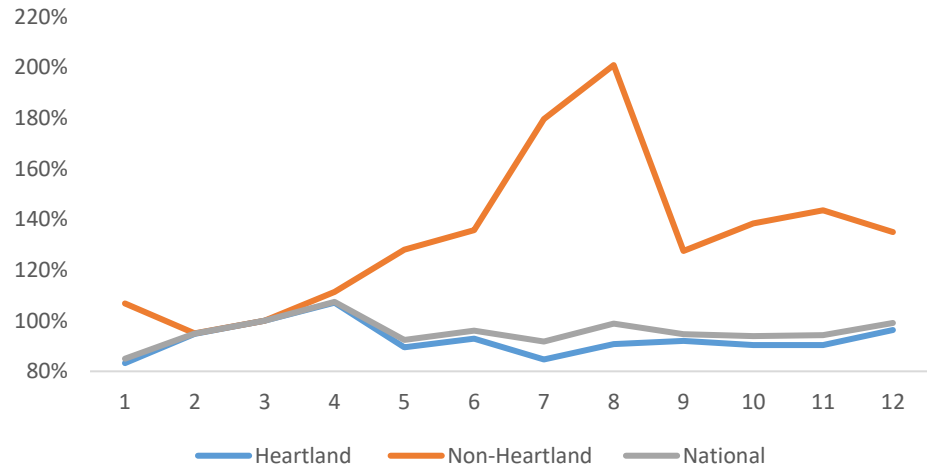


Figure 4 - Womens

