Sport, Business, Management: an International J

Federated networks in England and Australia Cricket: A Model of Economic Dependency and Financial Insecurity

Journal:	*Sport, Business, Management: an International Journal*
Manuscript ID	SBM-09-2021-0100.R2
Manuscript Type:	Research Paper
Keywords:	Financial Health, Cricket, Resource Based Dependency, England, Australia

Abstract

Purpose: The purpose of this study is to critically examine the financial health and performance of the English and Australian cricket networks. This includes the county cricket clubs (CCC) and state and territory cricket associations (STCA) affiliated to the England and Wales Cricket Board (ECB) and Cricket Australia (CA) respectively, as well as the ECB and CA themselves. We apply resource dependency theory to understand if there are any financial dependencies within the networks of cricket in England and Australia.

Research Design: The data for this research was obtained from the financial statements of the ECB, the 18 affiliated CCCs, CA, and the six affiliated STCAs. This sample covers the last 5 years of financial information (2014-2019) for all the organisations at the time of writing. Ratio analysis was conducted on all organisations within the sample to assess financial health and performance.

Findings: Both CCCs and STCAs show signs of poor financial health. There is a clear dependence on the financial support they receive from the ECB and CA respectively and this dependence appears more prominent in Australia. The ECB and CA have better financial health which ultimately allows them to financially support the CCCs and STCAs.

Originality: The ECB and CA are facing difficult financial decisions to remain financially secure themselves due to the impact of COVID-19 but also to support their affiliated clubs. The affiliated clubs do not generate sufficient revenues and must diversity their revenue streams if they are to become financially self-sustaining. This financial structure and distribution mechanism will be vital in safeguarding the future of some of England's and Australia's most important cricket organisations.

Keywords: financial health; cricket; resource-based dependency; England; Australia

Federated networks in England and Australia Cricket: A Model of Economic Dependency and Financial Insecurity

Introduction

The England and Wales Cricket Board (ECB) and Cricket Australia (CA) are National Governing Bodies (NGB) for cricket within England and Wales and Australia. Their role is to manage their respective national cricket teams and govern their affiliated domestic cricket networks. There are 18 professional County Cricket Clubs (CCCs) affiliated to the ECB and 6 professional State and Territory Cricket Associations (STCAs) affiliated to CA. The ECB and CA provide financial support to their affiliated CCCs and STCAs, which is a unique aspect of cricket's financial model.

The ECB and their affiliated CCCs and CA and their affiliated STCAs can be viewed as federated networks of cricket. Research has made considerable progress to understand the dynamics of interorganisational relationships within federated networks. Federated networks are comprised of two types of organisations - a single Network Administrative Organisation (NAO) and multiple federation affiliates (Provan & Kenis, 2008). In federated networks, affiliates remain autonomous, but certain decisions and coordination tasks are mandated to the NAO. The NAO will have its own objectives, which may conflict with the objectives of each affiliated organisation. The relationship between these organisations and their affiliates is central to the systemic governance of sport (Henry & Lee, 2004). Federated networks are an integral and institutionalised feature of the sport industry (Wäsche & Gerke, 2019; Leopkey & Parent, 2015; Dickson, Arnold, & Chalip, 2005; Meiklejohn, Dickson, & Ferkins, 2016).

However, a sport's federated network may underpin a financial model where the federation affiliates have significant financial dependencies on the NAO, which can result in risk and insecurity for the NAO, the affiliates, and the entire network. Previous studies by Plumley, Wilson, Millar and Shibli (2019) and Shibli and Wilkinson-Riddle, (1997) have attempted to understand the financial model of English cricket. However, both these studies did not quantify the distribution of revenues within the federated network of domestic English cricket, and apart from these two pieces of research, understanding the distribution of revenues within federated networks of sport organisations has escaped scholarly attention. Understanding financial dependencies is important for at least two reasons. First, it highlights whether federation affiliates are strategically weak due to their dependency on specific revenue streams. Second, it can provide critical insight to how and where these affiliates need to adapt their business model to reduce this financial dependency.

Guided by resource dependency theory (RDT) (Hillman, Withers & Collins, 2009), we investigate financial dependencies within a sport's federated network through a comparison of the ECB, CA, and their respective affiliated organisations. More specifically, we study (a) the financial health of the ECB, CA, and their respective affiliates (CCCs and STCAs); (b) the financial dependency of the CCCs and STCAs on the NAO (the ECB and CA); and (c) critically examine the business models of the ECB, CA and the respective affiliates, to provide descriptive analysis of future direction and strategy. The ECB and CA and their affiliated organisations are ideal contexts to study the theory of RDT within federated networks. Both are leading NGBs within world cricket and are founding members of the International Cricket Council (ICC) (Siddiqui, Yasmin & Humphrey, 2019). It would have been preferable to study a wider range of cricket NGBs and respective domestic affiliates, particularly comparing the Board of Control for Cricket in India (BCCI), the ECB and CA. However, the annual accounts and financial information was not publicly available for the BCCI and its affiliated domestic organisations. The ECB, CA, CCCs and STCAs were the only organisations that have their financial information readily available and within the public domain.

The financial impact of COVID-19 has already been felt across several sports, such as football and rugby union (Wilson, Plumley, Mondal & Parnell, 2020), with no spectator revenue due to matches being played behind closed doors and a reduction in sponsorship and commercial revenue. It is likely that such an impact will also be felt in cricket. Although the impact of COVID-19 will be discussed throughout this study, the data collection predates COVID-19.

The purpose of this study is to critically examine the financial health of the ECB and CA, as well as the CCCs and STCAs affiliated to them. This is to firstly understand what the financial health and performance is of two of world cricket's leading NGBs and their affiliated organisations to provide insight into how all these organisations operate and detect any trends of good practice. Secondly, establish the financial dependence of the CCCs and STCAs on their NGB and understand how these organisations can remain financially secure in the face of economic shocks, such as those associated with COVID-19. Finally, through the findings, provide suggestions for future direction and strategy that could be employed by the ECB, CA and their affiliated organisations to improve financial sustainability post COVID-19. The remainder of this paper is structured as follows. First, we describe the governance, elite level domestic competitions, and world cricket's financial distribution model. Next, we present RDT as the theoretical framework and review relevant literature on the financial health of professional team sport. The research questions and methods are considered before presenting the findings of this research and relevant discussion. Finally, we conclude with suggestions and recommendations for the ECB and CA and the sport more generally to become more financially sustainable.

Research context – Cricket in Australia and England

The Governance Game

The ECB has a membership of 41 affiliated organisations. There are the 18 CCCs, 21 Minor Counties (MC), the Minor Counties Cricket Association (MCCA), and the Marylebone Cricket Club (MCC) (England and Wales Cricket Board, 2020). For the purpose of this research, we focused on the 18 CCCs, because whilst the MCs, MCCA, and MCC are important stakeholders, they are not professional-playing organisations.

The CA governance model is less complex. CA has six affiliated organisations: Cricket New South Wales, Queensland Cricket, South Australian Cricket Association, Cricket Tasmania, Cricket Victoria, Western Australian Cricket Association. Each of these organisations are autonomous, but each STCA's constitution enables the STCA to affiliate with CA and to support the objects, functions, and undertakings of CA. Both the ECB and CA refer to their affiliated organisations as members within their 'membership-model' (England and Wales Cricket Board, 2020b; Cricket Australia, 2020). Please see Figure 1 for an illustrated organisational structure of the network of English and Australian cricket.

<Figure 1 about here>

Elite domestic cricket competitions

England's elite domestic cricket is underpinned by the 18 CCCs (see figure 1). The key competitions are 1) the County Championship, which is comprised of two, nine-team divisions with promotion and relegation playing four-day cricket. 2) The Royal London One Day Cup is a 50-over competition, played in two nine-team regionalised divisions with no promotion or relegation. The top two teams from each division compete in subsequent semi-final and final fixtures. 3) The Vitality T20 Blast is a 20-over competition that follows the same structure as the Royal London One Day Cup (England and Wales Cricket Board, 2020b). Finally, there is The Hundred, the ECB's revolutionary new limited-overs competition. The Hundred will be contested by eight new city-based franchises, each hosted at selected CCCs (The Hundred, 2019). The Hundred imitates the successful franchise-based tournaments in India (Indian Premier League) and Australia (Big Bash League). Scheduled to start in 2020, The Hundred was postponed until 2021 because of COVID-19. All 18 CCCs were expected to receive at least an additional £1.3m windfall from The Hundred (Millar, Plumley & Wilson, 2020).

Similar to England, there are three elite domestic competitions in Australian cricket (see figure 1). The six STCAs play four-day cricket in the Sheffield Shield and 50-over cricket in the Marsh One Day Cup, which both comprise of a single closed league. The Big Bash League (BBL) is Australia's 20-over competition. The BBL features eight city-based franchises and each STCA has at least one franchise, whilst Cricket New South Wales and Cricket Victoria have two (Cricket Australia, 2020).

Elite Cricket: Financial Model

Cricket has a distinct financial model whereby the ICC shares revenues from ICC-owned tournaments (e.g., 50-over and 20-over World Cups) with its 12 Full Member NGBs. The distributions are based on an eight-year cycle and agreed to in advance. However, the financial distributions are not shared equally. Zimbabwe, Afghanistan and Ireland receive the lowest amounts (US $50m-80m), whereas England and India receive the most (US $120m-260m). This inequality stems from the Board of Control for Cricket in India (BBCI), lobbying the ICC to favour the NGBs whose broadcast and media partners pay the most for broadcasting rights to the ICC-owned tournaments (ICC Annual Report, 2019). NGBs also generate significant revenues from hosting cricket events. Under the present model, the host NGB retains all domestic and international broadcast and commercial revenues from cricket series they host. Broadcasters in England, Australia and India are willing to pay substantial sums to acquire broadcasting rights for their respective domestic markets. Given this model, the broadcast partners of the ECB, CA, and BCCI generate the majority of broadcast revenues for the host NGB when England, Australia, and India go "on tour" to the other Full Member nations. To illustrate, the Chief Executive of New Zealand Cricket commented, 'The outlook for the 2020 financial year remains challenging. This means a continued focus on operational spend and delivering on the opportunities from England, India, and Australia touring.' (NZC Annual Report, 2019, p.7).

Each NGB provide financial distributions to their domestic affiliated organisations. Given the unequal revenues generated by each NGB, the amount of money distributed to network affiliates varies considerably. In 2019, CA distributed £71m to their STCAs and the ECB £43m to their CCCs. In comparison, Cricket West Indies distributed £5.5m and New Zealand Cricket £4.2m to their affiliated domestic organisations in 2019 (CA Annual Report, 2019; CWI Annual Report, 2019; ECB Annual Report, 2018; NZC Annual Report, 2019). Due to these unequal revenues between NGBs, it poses a competitive advantage for England, Australia and India. They have more financial resources to invest in their coaching, back-room support staff, and elite pathway programs that all improve on-field performance.

In summary, international cricket is the "cash cow" for NGBs. These revenues are key to funding their high performance and athlete development programs, which are implemented in partnership with their network of affiliated organisations. Domestic cricket in England and Australia is both an elite competition, as well as a developmental pathway for the respective national teams. We now present our theoretical framework of RDT to highlight the financial relationship between the NAO and federated affiliates.

Background Literature

RDT was first proposed by Pfeffer and Salancik (1978) and further developed by the same authors over two decades later (Pfeffer & Salancik, 2003). Put simply, RDT proposes that organisational survival depends on accessing a sufficient quantity and quality of resources from the external environment. An organisations's power depends on its relationships with other organisations. If one organisation is greatly dependent upon another organisation for important resources or processes (e.g. manufacturing, logistics) this organisation has considerable power over the primary organisation (Pfeffer & Salanick, 2003; Medcof, 2000;

Pfeffer & Salancik, 1978). Organisations are naturally inclined to reduce dependency on certain resources and maintain independence over other resources to ensure their ability to cope with uncertainty and minimise uncertainty for other organisations (Bryant & Davis, 2012).

Previous research applying RDT to a sporting context is scarce and predominately focuses on the dependencies of specific resources in a community and voluntary sport context (Wicker and Breuer, 2013; Wicker and Breuer, 2015). Cordery, Sim and Baskerville (2018) found that utilising RDT was a strong indicator for predicating financial vulnerability. Their findings showed that community football clubs in New Zealand were financially vulnerable because of dependencies on external 'unearned' sources of revenue (for example charitable grants) and recommended that clubs should focus on seeking new revenue streams to reduce the likelihood of financial vulnerability. These studies are focused on the non-profit sporting sector, and it is a worthwhile comparison to understand if the same trends are present within commercial sporting organisations, such as CCCs and STCAs within this study. It is clear that sport organisations should acquire multiple revenue streams, avoiding dependency on any single source of revenue (Froelich 1999). Gumulka, Barr, Lasby and Brownlee (2005) recommend that sporting organisations or clubs should not receive more than 50% of revenue from a single source and suggest if this 50% threshold is breached, then the organisation is deemed 'economically' dependent on this source of revenue.

However, RDT in a sporting context is not confined to economic factors. External resource factors such as support from higher organisations (e.g., governing bodies or federated networks) should also be considered as important resources (Oliver, 1990). Thus, we argue that RDT is a relevant theory in relation to our study on the connection (dependency) between the network affiliates (CCCs and STCAs) and their NGBs (ECB and CA).

Understanding Financial Security in Professional Team Sports

Over the last decade there has been a considerable development in the literature showcasing the factors affecting financial health in professional sport properties. Although the majority of previous research has focused on the financial health of football (Wilson & Plumley, 2018; Plumley, Wilson & Shibli, 2017; Buraimo, Simmons & Szymanski, 2006), there are studies on financial health in; rugby union (Wilson & Plumley, 2017; Williams, 2012), rugby league (Wilson *et al*., 2015) and cricket (Plumley *et al*., 2019; Shibli & Wilkinson-Riddle, 1997). Within this section, we focus our examination on rugby union and rugby league because they are more comparable to cricket in financial terms (e.g., similar size of revenue). We have purposely ignored football due to the drastically higher revenues and different business models mean it is not a worthwhile comparison. To put into context the financial disparity between the English Premier League (EPL) and CCCs, the cumulative revenue of the 20 EPL clubs in 2019 was £5.1bn whereas the cumulative revenue of the 18 CCCs in 2019 was £210m. Even in some of the smaller football leagues, the dynamics of the sport in terms of fan bases and wider commercial reach mean that it does not offer solid grounds for comparison with cricket in financial terms.

Most prior research on rugby league, rugby union and cricket found consistency with the European model of utility maximisation and that teams' value on-field performance over financial 'off-field' performance. Whilst it is widely accepted that the economics of professional team sports is fundamentally different to mainstream business, previous research highlights the regular occurrence of poor financial management in professional team sport (Wilson & Plumley, 2018; Wilson & Plumley, 2017; Wilson *et al*., 2015; Dietl & Franck, 2007).

Wilson *et al*. (2015) found that the majority of clubs competing in the English Super League, a rugby league competition, were financially insecure, with poor financial health. At best most clubs were breaking even, and several clubs had issues with debt and had a short-term outlook of financial health. Due to static growth in revenues and a lack of private investment these issues with debt were only going to remain. However, there was a small number of clubs with a large fan base and a history of on field success, that were financially secure and had sufficient assets to use for future investment in facilities that showcased they have a long-term vision of financial sustainability. As discussed in Wilson and Plumley (2017) and Williams (2012) the financial situation of rugby union clubs in England is similar. Despite marginal growth in the revenues for all elite clubs, there are individual cases of clubs with considerable debt issues and a lack of focus on long-term financial sustainability.

Focusing on cricket, Shibli and Wilkinson-Riddle (1997) found demand for CCCs fixtures was non-existent and commercial revenue was insufficient to support the structure of the clubs and unlikely to grow. The majority of revenue was an annual grant from the ECB, which the CCCs were heavily reliant on to remain financially viable. This showcased the financial insecurity of the CCCs and a change to their business model was required to ensure long-term financial sustainability. Plumley *et al*. (2019) replicated the analysis from Shibli and Wilkinson-Riddle (1997) to understand if the financial climate had changed and investigate whether the CCCs have adapted their business model to become more financially sustainable. Whilst cricket had radically changed from 1997 with the introduction of T20 cricket in 2003, the reliance on the ECB grant revenue remained. There was an indication that CCCs have recognised the need diversify their income streams, with considerable investment in capital expenditure projects to grow their commercial 'non-cricket' revenue. A further finding was the disconnect between the CCCs that host international cricket matches and those that do not. The CCCs that hosted international fixtures generated considerably more revenue. In summary, the financial issues highlighted by Shibli and Wilkinson-Riddle (1997) remained in English cricket.

Research Questions

The previous sections have highlighted the rationale and context for this research. This study poses the following research questions:

RQ1. What is the financial health of the ECB, CA and their affiliated organisations?

RQ2. Which country has the most desirable financial health for their NGB and affiliated organisations?

RQ3. To what extent are the CCCs and STCAs economically dependent on their NGB?

RQ4. Does economic dependency vary between the affiliated organisations?

RQ5. Are there any trends of good practice within the CCCs and STCAs to improve overall financial health and performance post COVID-19?

Methods

Data Sources

The financial data for this research was obtained from the financial statements of the ECB, the 18 CCCs, CA, and the six STCAs. Due to the difference in accounting year ends between the different organisations, the financial data for the CCCs and the ECB is from September 2014 until January 2019. The financial data for the STCAs and CA is from June 2015 until June 2019. This covers the last five accounting periods for all the organisations at the time of writing. All the financial data has been sourced from each organisation's (CCCs, STCAs, ECB and CA) annual accounts and financial statements. The key financial data that has been extracted from the annual accounts and financial statements is; revenue, itemised revenue breakdown, debt (current and non-current liabilities) and profit and loss. These documents are publicly available via Companies House in the UK and the Australian Securities and Investments Commissions in Australia.

Currency Conversion

To allow direct comparisons between the English and Australian organisations, each set of financial statements was converted into the opposing countries currency. The conversation rate used was the average rate for the accounting period. An example of the conversion method used for this study can be found in Table I. All conversion rates were sourced online using XE Currency Conversion (XE, 2020).

<Table I about here>

Analysis

All the relevant financial data from the financial statements (e.g., turnover, profit, current and fixed assets, and current and non-current liabilities) was recorded in a Microsoft Excel spreadsheet for secondary analysis. The financial analysis performed used standardised industry techniques such as ratio analysis to access each organisation's financial health. This replicated the analysis of Plumley *et al*. (2019) and the studies by Wilson and Plumley (2017) and Wilson *et al*. (2015) on the financial health of rugby league and rugby union clubs. Finances were analysed in relation to turnover, growth, revenue sources, profitability, and debt levels. The first three indicators relate to an organisation's ability to generate revenue and make a profit. The latter relate to an organisation's ability to meet its liabilities as they fall due. In relation to the analysis on turnover, profitability and debt levels, these figures have been averaged across the sample period. The reason for choosing average figures is to remove any anomalies and provide a more accurate reflection of an organisation's financial health and performance over a sustained period. Figures 2 and 5 are reported in '000s (e.g., Surrey's average turnover of 29,372 equates to £29.372m), the reason for this is because this is how the financial data is reported in the financial statements. In figures 3 and 7 the data is reported in millions. The revenue sources for the CCCs and SCTAs has been broken down by analysing the notes to financial statements and placing the revenue into the following categories: ECB/CA payment (annual grant payment), Other Income (revenue generated through streams not associated cricket, i.e., conferences and music concerts), Commercial Income (sponsorship revenue), Subscriptions and Domestic Income (revenue from annual memberships and spectator income from hosting domestic cricket events) and Major Match Income (revenue from hosting international and world cricket events). We have taken the definition from Gumulka *et al*. (2005) and labelled the CCC and SCTAs 'economically dependent' on the ECB or CA if they received over 50% of their revenue from the ECB/CA payment. In the next section we provided an integrated results and discussion.

Results and Discussion

This section is divided into a number of areas. First, we begin with a comparison of the ECB and CA network affiliates (CCCs and SCTAs). These organisations are compared individually and collectively across a number of metrics: Turnover and Growth, Revenue Sources, Profitability and Debt Levels. This is followed by a comparison of the ECB and CA across the following metrics: Turnover and Growth, Profitability and Debt Levels.

ECB and CA Member Organisations

Turnover and Growth

The average annual turnover of the CCCs and SCAs from 2014-2019 is summarised in Figure 2 below.

<Figure 2 about here>

Figure 2 indicates that Surrey CCC has the highest average revenue amongst the CCCs and STCAs. Surrey CCC's dominance reflects an excellent business model of maximising cricket revenue, the importance of hosting lucrative international matches and developing a number of non-cricket revenue streams.

Although a CCC holds the number one position, STCAs occupy the next five positions. Tasmania is the only outlier, narrowly behind Lancashire and Warwickshire. All of the STCAs are in the top 10. Table II summarises the top 6 capacities of stadiums which host international cricket matches in Australia and England. Australian stadiums have significantly larger capacities than those in England. This disparity in capacity means the STCAs have the potential to generate more revenues from hosting domestic and international matches compared to the CCCs. For example, a capacity crowd at a single day of cricket at the Melbourne Cricket Ground is the equivalent of four days of capacity crowds watching cricket at Lords, Old Trafford and The Oval.

<Table II about here>

Taking a network wide approach, Figure 3 shows the combined annual revenues of all the CCCs and STCAs between 2014-2019. Unsurprisingly, given there are 18 CCCs and only six STCAs, the CCCs generate more combined revenue. Overall, both networks have experienced sustained revenue growth, with the STCAs producing year-on-year growth from 2015-2018.

Figure 3 also shows the combined annual revenues without the income from ECB/CA annual grants. The gap between the CCCs (with and without the ECB grant income) is smaller than the gap for the STCAs. Note that even if the ECB grant income is removed from the CCCs, they still have a similar total revenue to the STCAs with CA grant income included.

<Figure 3 about here>

Revenue Sources

Figure 4 displays the breakdown of revenue from 2014-2019. The STCAs receive 57% of their revenue from annual CA grants. By comparison, the ECB grants make up 28% of the CCC revenue. The ECB-CCC distributions support the conclusion of Plumley *et al*. (2019), that there was a significant over-reliance by CCCs on their ECB grant income. The STCAs appear even more reliant on their annual grant income than their English equivalents. However, this reliance differs considerbly between CCCs and STCAs, for example Leicestershire receive 66% of their revenue from the ECB grant, which is the highest of all the CCCs, whereas it only accounts for 8% of Surrey's annual revenue. Overall, for six of the 18 CCCs (Middlesex, Worcestershire, Kent, Derbyshire, Leicestershire and Northamptonshire), the ECB grant makes up 50% or more of their annual revenue and therefore we would define them as 'economically dependent' on the ECB grant. For the STCAs, 68% of New South Wales's annual revenue is attributed to their CA grant income, which is the highest of the STCAs. Tasmania has the lowest at 47% and is the only STCA below the 50% threshold and therefore the only STCA not 'economically' dependent on the CA grant.

There is a clear trend that the CCCs have started to pursue revenue diversitifcation to supplement their cricket-related revenues and ultimately grow revenue. In total 'Other Income' accounts for 29% of CCCs total revenue and is the most dominant revenue stream. 'Other Income' represents revenue that is generated through streams not associated with cricket. For example, a number of CCCs have invested in conference and hotel facilities that can be utilised year-round and the infrastructure to host non-cricket events such as music concerts and other sporting events. It is clear that the CCCs that have focused on this revenue diversification show greater financial performance. Surrey's (46%), Lancashire's (52%) and Warwickshire's (41%) 'Other Income' is their most dominent revenue source and it is these three CCCs that have the highest average turnover (see figure 2) of all the CCCs. This demonstrates a positive step towards decreased dependency on the ECB grant income.

<Figure 4 about here>

Profitability

In terms of profitability, the majority of CCCs and STCAs are at best breaking even. Figure 5 summarises the profitability of each CCC and STCA. The STCAs are more profitable than the CCCs, with three STCAs (Victoria, South Australia and New South Wales) on average turning a profit over the sample period. Surrey and Glamorgan both made surpluses, although the Glamorgan's result requires further explanation. When the latest Future Tours Programme (FTP) was released by the ICC, the English home international schedule saw a reduction in Test Matches from seven to six (ICC, 2017). This would have placed additional pressure on the already competitive tender process that CCCs go through to secure the lucrative international matches. Therefore, the ECB provided Glamorgan with a £2.5m one-off fee if they did not bid to host any Test Matches in the cycle (Telegraph, 2018).

Most of the STCAs are profitable, which suggests good financial health. However, if the annual grant income from CA is taken away, these profits turn into substantial losses. This is also the case for a number of CCCs although the losses without ECB grant income would still be less than those seen in the STCAs.

<Figure 5 about here>

Debt Levels

The STCAs have considerably better debt levels than the CCCs, (see Figure 6). With the exception of Tasmania (81%), the remaining five STCAs make up the seven lowest debt ratios. This demonstrates good financial health, particulcaly as the general rule of thumb in professional team sport is to keep an organisation's debt level below 60%. Furthermore, the figure for Tasmania can be linked to their investment in upgrading the Bellerive Oval in 2013. They had to borrow significant funds to finance this infrastructural project (Cricket Tasmania, 2012). This also explains why many of the CCCs have such high levels of debt. Yorkshire (110%), Lancashire (107%) and Warwickshire (93%) have all completed large-scale infrastructural projects in recent years to increase their ground capacity and improve their facilities, to ensure they continue to host international matches in the future and develop new revenue streams.

The average balance sheet debt for each STCA is £6.9m, although £23.2m of this is attributed to Tasmania. Each STCA on average has total assets of £25.2m and therefore a positive equity of £18.3m. Positive equity demonstrates good financial health because it can be used to finance capital expenditure projects or reduce debt levels if required. In comparison, the average balance sheet debt for the CCCs is over double that of the STCAs and stood at £14.7m, and on average each club has £18.3m of total assets. Across the 18 CCCs, there is a positive equity of £3.6m although Yorkshire (-£2.6m) and Lancashire (-£2.3m) have negative equity, which means they don't have enough assets to service their liabilities and is an indicator of poor financial health.

<Figure 6 about here>

Variance Analysis

The previous analysis details the CCCs and STCAs turnover, profit/loss and debt as an average figure across the sample period. To provide further insight, Tables III and IV show the year by year figures of these indicators as an average per organisation. Overall, STCAs generate considerably higher revenues per organisation than the CCCs, with a high of £24.3m per STCA in 2018, compared to a high of £9.3m per CCC in 2017. Whilst there is annual variance in terms of revenue growth and shrinking, the STCAs revenue has grown across the sample by 46% from £16.1m (2015) to £22.9m (2019). This is mirrored within the CCCs but to a less extent, as revenue grew by 19% from 2014 to 2018. In terms of profit/loss, as expected this follows a similar trend to revenue with annual variance in growth and shrinking. In each year of the sample (2015-2019) the STCAs posted a profit per organsation. However, profitability did shrink by 43% from 2015 to 2019. This showcases the link between financial performance and which international teams are touring in that specific financial period, which is particularly important in cricket versus other professional team sports.

The debt ratio for both the CCCs and STCAs has remained static across the sample. However, as discussed the STCAs have much preferable debt levels compared to the CCCs. The STCAs had a high of 35% debt ratio in 2019, compared to 72% in 2014 for the CCCs. Overall, the debt ratio has grown by 5% for the STCAs from 2015 to 2019, whereas the CCCs has seen a reduction of 5% from 2014 to 2018.

We have also conducted statistical analysis to compare the means as part of this variance analysis. The findings in this regard show a signifcant difference for turnover and debt ($p<0.01$) but not for profit. This reinforces the findings above that the STCAs are outperforming the CCCs both in terms of generating revenue and having significantly lower levels of debt.

<Table III about here>

<Table IV about here>

ECB vs CA

Turnover and Growth

Table V shows that CA generates more revenue than the ECB and they have seen substantial year on year growth over the last four years. The ECB's revenue growth is mixed in comparison, with revenue falling from £174m in 2014 to £118m in 2016, recovering to £172m in 2018. There is an expectation that the ECB's revenue will grow considerably in 2019 due to hosting the 50-over World Cup and a home Ashes series. In addition, table III shows which teams toured England and Australia in the financial year. Due to the FTP, multiple teams tour during each year but there is always a 'primary' tourist. In table V, the primary touring team is in bold. There is a noticeable trend that when India is the primary touring team, this significantly inflates revenue. This is due to the international broadcasting deals that are negotiated on an individual series basis, as discussed in the Introduction. In 2014, when India toured England for 5 Test matches and 5 ODIs the ECB's revenue was £174m, whereas the following year for the home Ashes series of the same number of matches, revenue dropped to £133m. This only highlights that broadcasting income drives revenue and growth. CA's record breaking $1.2bn domestic broadcasting deal came into effect in 2018, which resulted in revenue jumping from £186m in 2017 to £229m in 2018.

<Table V about here>

Profitability

In terms of profitability, CA perform much better than the ECB (see figure 7), only making one loss in the last five years. In the same time frame, the ECB made two considerable losses of £30m and £37m in consecutive years. Both NGBs have high running costs, their role is not to make a profit, but re-distribute their revenue to support and grow cricket and develop successful national teams. In 2019, CA provided £71m of annual grants to their member STCAs and had £104m in costs associated with the operations of the Australian national squads. By comparison, in 2018 the ECB distributed £43m to their CCCs and had £32m in salary costs for the England national teams. These costs remain relatively static year on year which again showcases the relationship between revenue and profitability levels and which international teams are touring.

<Figure 7 about here>

Debt Levels

Table VI shows that CA's debt level has remained relatively consistent over the last 5 years and hovers around 60%. However, by comparison, the ECB's debt ratio has jumped from a healthy 31% in 2015 to 90% in 2017 which should be a cause for concern. The reason for this significant increase is due to heavy losses in 2016 and 2017. To cover these losses, the ECB utilised accruals and deferred income, likely from ticket sales and broadcasting revenue. This is fine as a financial control mechanism, but it is also a time limited resource if revenue continues to reduce or be impacted in the future.

<Table VI about here>

CA has an average balance sheet debt of £102m from 2015-2019, with the ECB's standing at £62m from 2014-2018. The ECB's total debt was £109m in 2018 although they have £119m of current assets at hand to service this debt if required. CA have fewer current assets at hand but hold £102m of fixed assets. CA's strategy has been to develop a long-term investment portfolio, which has increased from £16m in 2015 to £50m in 2019. This is a considerable figure, and whilst these investments are deemed "low-risk", they are still prone to losses if there is a global financial crisis. Without a high level of current assets, CA doesn't have the ability to service short-term debt to the same ability as the ECB.

Discussion

The findings of this paper point to some key discussion points and recommendations for the ECB and CA. To answer RQ1 both CCCs and STCAs show signs of poor financial health across a number of performance indicators (profitability and debt levels). This is symptomatic of a wider problem with financial health in professional team sports that has been highlighted in the past in football (Plumley *et al.*, 2017), rugby union (Wilson & Plumley, 2015), rugby league (Wilson *et al.*, 2015) and cricket itself in respect of the CCCs (Plumley *et al.*, 2019; Shibli & Wilkinson-Riddle, 1997). In this regard, it is clear that there is still more that needs to be done, particularly at a governance level to improve financial sustainability and emphasis on growing revenue because it is clear the domestic organisations are not generating sufficient amounts of revenue from their primary activities to make a surplus.

To focus on RQ3, it is of concern, for the CCCs and STCAs in this study, their continued dependence on the grant income from their respective NGB. This dependence appears more prominent in Australia although this is partly attributable to a different method of revenue distribution by CA compared to the ECB. Nonetheless, the findings from this study indicate an economic dependence on the NGBs from six CCCs and five STCAs, consistent with the RDT theory. Consistent with the findings of Cordery *et al*. (2018) and to answer RQ4 this economic dependence is not present for all CCCs, there is a clear trend that the CCCs that have focused on revenue diversification (e.g., Surrey, Lancashire and Warwickshire) are not dependent compared to those CCCs with limited 'non-cricket' revenue streams (e.g., Leicestershire and Northamptonshire). Whilst the findings from Cordery *et al*. (2018) and Wicker and Breuer (2015) are based on community sport organisations, our findings suggest the same dependencies are present in NGBs and commercial sports organisations. The network affiliates that achieve revenue diversification ultimately create an additional layer of financial security for themselves and within the entire network. However, in the case of this sport federated network, as long as the NGB is in relatively sound financial health and can continue to provide annual financial support in the form of grant distributions, it remains a viable financial model for the whole network and although there is a economic dependence on the NGB, the CCCs and STCAs are not financially insecure.

Looking beyond the CCCs and STCAs, the ECB's and CA's revenue is driven by the value of broadcasting and commercial deals associated with the respective national teams. It is this revenue that ultimately allows them to provide financial support to CCCs and STCAs. The NGB requires a successful national team and successful domestic competitions as the sellable product to maintain and grow this broadcasting and commercial revenue. However, as Vrooman (2015) suggests it is paramount there is a contest between equally matched opponents and a strong global 'product' in relation to the sport as a whole for the ECB and CA continuing to benefit from the broadcasting deals signed by them (and BCCI) that in turn benefit the whole sport right down to the affiliated networks. As discussed in the introduction, if the ECB, CA and BCCI continue to hold a competitive advantage due to their elevated levels of financial resource, this will create a competitive natural cartel. A fairer system of financial distribution from the ICC needs to be implemented across the whole NGB network to reduce the competitive advantage held by the ECB, CA, and BCCI. In terms of the domestic cricket network, if there remains a collective buy-in between the affiliated domestic organisations (e.g., CCCs and STCAs) and the NGBs and vice versa the partnership should remain relatively stable. Of greater concern, is to the CCCs and STCAs, if the NGBs come under financial pressure and cannot continue to offer the level of financial support that they currently do. This is where the CCCs and STCAs become financial insecure and is a realistic scenario in the current climate and the acute impact of COVID-19. A sport such as cricket, that relies on a considerable international fixture list to drive revenue, will be significantly hit by the implications linked to COVID-19 in the short term.

At the time of writing, we have been able to access partial financial data, which covers the first financial period of COVID-19. The financial impact is stark, with cumulative revenue of all the CCCs falling by 42% from £210m in 2019 to £117m in 2020. The annual distribution payments by the ECB increased in 2020 and accounted for 58% of this cumulative CCC revenue (£61m), which showcases the importance of the financial support from the NGBs to navigate the affiliated domestic members through the uncertainty of COVID-19. Spectator-generated revenue only accounted for 19% of revenue (£23m), which was expected given that matches were played behind closed doors. However, this highlights a risk going forward for CCCs as this spectator-generated revenue is unlikely to return to pre-COVID-19 levels in the short term and this places additional reliance on the annual distribution payments from the NGB. In both the short and medium term linked to the pandemic, the CCCs will remain reliant on support from their respective governing bodies, especially in England.

Therefore, it is also important that the CCCs and STCAs continue to look to expand and diversify their revenue streams, especially the streams that they have direct control over. To answer RQ2, it is clear that, with the exception of Surrey, the Australian STCAs outperform their English counterparts. They have higher turnover, are relatively profitable and have much lower levels of debt. Focusing on RQ5, Surrey have led the way in diversifying revenue streams, and this should be seen as best practice, that all CCCs and STCAs can learn from. Their focus on ‘non-cricket’ revenue has created a lucrative revenue stream that can act as a form of financial buffer when the sporting element of the revenue mix is not performing as expected. Indeed, the realisation that sporting organisations, in general, have facilities that are only in use for a small percentage of the calendar (match day specific) means that more organisations have been looking to utilise ‘non-sporting’ events in their stadia to enhance revenue. There is growing evidence to suggest the greater emphasis and focus on revenue streams outside of the primary activity (in this case hosting cricket events) the better the level of financial performance and signs of financial health. In this regard, some of the CCCs are ahead of the curve and have placed additional focus on creating 'non-cricket' revenue streams to create a more self-sustaining business model. This is suggested as an area of development for Australian STCAs in the future. There is a need for both the CCCs and STCAs to become more commercially driven, and an aspect of this approach could be to increase the value commercial partnerships. A growing trend in professional team sports is to sell the naming rights of stadia, which is evident within the CCCs for example Surrey's Kia Oval and Lancashire's Emirates Old Trafford. As discussed in Huth (2018) there can be supporter resistance to changing the name of stadia and therefore a potential solution is to utilise crowdfunding from supporters to secure the tradional naming rights, whilst generating revenue. Findings from Huth (2018) indicated that supporters would be willing to participate in these supporter-based financial instruments as an alternative to existing commercial naming rights. However, the amount that can be generated through these supporter-based financial instruments can be limited and may not have the same value as tradional commercial naming rights. In addition, naming rights of stadia can be viewed as a saturated market and in the case of STCAs because they do not own their stadia, they do not have the authority to negotiate such commercial partnerships.

At present, both the ECB and CA show relatively strong financial health. CA show slightly better health than the ECB overall, but both are well-placed to continue to provide financial support to their affiliated members. However, this also has the potential for financial complacency to set in. Some of the CCCs and STCAs are economically dependent on the NGB and if the NGBs fail in the future, then it is likely the CCCs and STCAs will too as a result. Thus, we present two clear recommendations based on our results. First, CCCs and STCAs must attempt to diversify their own revenue streams, outside of cricket, to make themselves more financially sustainable in the long-term. Whilst this may seem an obvious recommendation within a business management context, it is clear from this study that maximising revenues from the tradional streams (hosting matches/events, membership, spectator, and commercial revenue) is not providing sufficient revenue for a sustainable business model in cricket. Therefore, a change of approach is needed, and the example of how to diversify revenue streams set by Surrey, Lancashire and Warwickshire needs to be followed. This focus on how to generate revenue when cricket events and matchdays are not taking place is more important than maximising event and matchday revenue. Diversifying the revenue mix requires careful strategy and investment in personnel and facilities to be successful. For example, Surrey have created separate social media channels for their sporting-related and venue-related content. There has been a trend of professional sports clubs separating their primary brand (e.g., their sporting brand) and their venue brand. This is an excellent strategy to engage new markets and showcase that the venue is open for business outside of matchdays. Second, rather than looking to increase the amount of annual grant income to CCCs and STCAs through more lucrative commercial and broadcasting deals, the NGBs should look to reduce them over time and support their affiliated members instead to develop other options to diversify their revenues. This could be in the form of using the grant income to invest and develop new infrastructure to allow the CCCs and STCA to create 'non-cricket' platforms and facilities that can be used year-round and will then produce additional revenue streams in the future. In time, this could cause a greater shift away from economic dependence towards individual financial sustainability and security. However, due to COVID-19 the dependence on the annual grant income from NGBs has increased and the shift towards diversifying revenue streams is unlikely to occur in the short-term because the CCCs and STCAs should focus on re-establishing their spectator-generated and non-cricket revenue streams, rather than growing them.

Conclusion

The financial impact of COVID-19 is going to have a considerable impact on cricket. The reduction in broadcasting and commercial revenue because matches were cancelled and played behind closed doors is going to be acutely felt by the ECB and CA, it is this broadcasting and commercial income that generates the revenue that is ultimately given to the CCCs and STCAs through the annual grants. The English men's national team agreed to take a 15% cut in their wages over the course of 2020 and 2021 in order to help the ECB manage costs in the short-term.

There is also a wider concern that the financial impact of COVID-19 will have a more considerable toll on the other major cricketing nations that are not as financially sound as England and Australia. The risk to England and Australia is the global game needs to be strong to ensure there is a sellable 'product' that drives commercial and broadcast revenue in the long-term. It is these revenues that allows the NGBs to distribute such financial support to their domestic affiliated organisations, who for some as seen in this research are economically dependent on them.

It must be noted that this study does have limitations such as the financial data available only allows for a descriptive level of analysis. In this regard, there are further avenues for future research in this area. One area would be to conduct qualitative data collection with key stakeholders within English and Australian cricket (e.g., administrators within the ECB and CA, CEOs of CCCs and STCAs). This would provide further understanding of the dependencies within the network but also grasp what support the CCCs and STCAs need from their NGB to diversify revenue and focus on growing their 'non-cricket' revenue. In addition, it would be beneficial to conduct a study that investigates the financial health of the NGBs of the ICC's 12 Full Members. This would not only provide an overall assessment of the impact of COVID-19 on the sport, but it would also provide a more holistic view of the global game to highlight potential strategic weaknesses. This could also link to the creation of a new framework of financial distribution from the ICC that is focused on reducing the financial inequalities within the Full Members and the financial gap between the Full Members and the Associate Members (the members that do not play Test Match cricket) to ensure the network remains financially healthy and safeguards the future of international cricket.

Further research in the future could also look to assess the financial picture in a few years' time following the COVID-19 pandemic to see how the financial situation has changed in relation to English and Australian cricket. These countries, alongside India, will remain at the forefront of the game and will still have to support the wider cricket network economically. That said, there is currently clear evidence that CCCs and SCTAs are over-reliant on their respective NGBs and continued efforts in the future should be on reducing this economic dependence.

Declaration of Interest: No potential conflict of interest was reported by the authors.

Funding: This research received no external funding.

References

Andreff, W., & Staudohar, P. (2000). The Evolving European Model of Professional Sports Finance. *Journal of Sports Economics,* 1 (3), 257-277. https://doi-org.hallam.idm.oclc.org/10.1177/152700250000100304

Arrow, K. (1985). *The economics of agency. Principals and agents: The structure of business*. Boston MA: Harvard Business School Press.

Barringer, B., & Harrison, J. (2000). Walking a tightrope: creating value through interorganizational relationships. *Journal of Management,* 26 (3), 367-403. https://doi.org/10.1016/S0149-2063(00)00046-5

Bryant, P., & Davis, C. (2012). Regulated Change Effects on Boards of Directors: A Look at Agency Theory and Resource Dependency Theory. *Electronic Business Journal*, 13 (6), 364-378.

Buraimo, B., Simmons, R., & Szymanski, S. (2006). English Football. *Journal of Sports Economics,* 7 (1), 29–46. https://doi-org.hallam.idm.oclc.org/10.1177/1527002505282911

Cordery, C., Sim, D., & Baskerville, R. (2018). Financial Vulnerability in Football Clubs: Learning From Resource Dependency and Club Theories. *Third Sector Review,* 24 (1), 49-70. https://ssrn.com/abstract=3145323

Cricket Australia. (2020). Available online. https://www.cricketaustralia.com.au/about/member-associations. (accessed 23rd October 2020).

Cricket Australia Annual Report (2020). Available online. https://read.e-brochures.com.au/cricketaustralia/annual-report-2019-2020/#page/0. (accessed 18th August 2021)

Cricket Australia Annual Report. (2019). Available online. https://read.e-brochures.com.au/cricketaustralia/annual-report-2018-2019/#page/0. (accessed 25th July 2020).

Cricket Tasmania. (2012). Available online. https://www.crickettas.com.au/news/blundstone-redevelopment/2013-06-07. (accessed 26th August 2020).

Cricket West Indies Annual Report. (2019). Available online. https://www.windiescricket.com/documents/51/CRICKET_WEST_INDIES_INC_2019_-_Final_002.pdf. (accessed 21st September 2020).

Dickson, G., Arnold, T., & Chalip, L. (2005). League Expansion and Interorganisational Power. *Sport Management Review,* 8 (2), 145-165. *https://doi.org/10.1016/S1441-3523(05)70037-1*

Dietl, H., & Frank (2007). Governance Failure and Financial Crisis in German Football. *Journal of Sports Economics,* 8 (6), 662-669. https://doi.org/10.1177/1527002506297022

Dobson, S., & Goddard, J. (2001). *The Economics of Football* (2nd ed.). Cambridge: University Press.

Garcia-del-Barrio, P., & Szymanski, S. (2006). Goal! Profit maximisation versus win maximisation in soccer. *Review of Industrial Organisation*, 34, 45–68.

Gratton, C., Liu, D., Ramchandani, G., & Wilson, D. (2012). *The Global Economics of Sport* (1st ed.). Routledge (Chapter 2).

Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review,* 32 (3) 543-579. https://doi-org.hallam.idm.oclc.org/10.2307/256434

England and Wales Cricket Board. (2020a). Available online. https://www.ecb.co.uk/news/1816026/chairmans-blog-a-look-at-ecbs-financial-challenges-due-to-covid-19. (accessed 18th August 2021)

England and Wales Cricket Board. (2020b). Available online. https://www.ecb.co.uk/about-us/about-the-ecb. (accessed 2nd December 2020).

England and Wales Cricket Board. (2018). Available online. https://www.ecb.co.uk/governance/corporate-governance. (accessed 22nd October 2020).

England and Wales Cricket Board (2017). Available online. https://www.ecb.co.uk/news/425049. (accessed 4th May 2020).

England and Wales Cricket Board Annual Report. (2018). Available online. https://www.ecb.co.uk/about-us/ecb-financial-structure. (accessed 16th April 2020).

Feng, C., & Wang, R. (2000). Performance evaluation for airlines including the consideration of financial ratios. *Journal of Air Transport Management, 6 (3), 133-142. https://doi.org/10.1016/S0969-6997(00)00003-X*

Fligstein, N., & Freeland, R. (1995). Theoretical and comparative perspectives on corporate organization. *Annual Review of Sociology*, 21 (1), 21–43. http://doi.org/10.1146/annurev.so.21.080195.000321.

Froelich, K. (1999). Diversification of Revenue Strategies: Evolving Resource Dependence in Nonprofit Organizations. *Nonprofit and Voluntary Sector Quarterly,* 28 (3), 246-268. https://doi.org/10.1177/0899764099283002

Gumulka, G., Barr, C., Lasby, D., & Brownlee, B. (2005). Understanding the Capacity of Sports & Recreation Organizations. Imagine Canada.

Henry, I., & Lee, P. (2004). Governance and ethics in sport. *The Business of Sport Management.*

Hillman, A., Withers, M., & Collins, B. (2009). Resource Dependence Theory: A Review. *Journal of Management,* 35 (6), 1-24. https://doi.org/10.1177/0149206309343469

Hodge, M., & Piccolo, R. (2005). Funding source, board involvement techniques, and financial vulnerability in nonprofit organizations: A test of resource dependence. *Nonprofit Management & Leadership,* 16 (2), 171-190. https://doi.org/10.1002/nml.99

Hoehn, T., & Szymanski, S. (1999). The Americanization of European football. *Economic Policy*, 14 (28), 204-240. https://doi.org/10.1111/1468-0327.00048

Horch, H. (1994). On the socio-economics of voluntary organisations. *International Journal of Voluntary and Nonprofit Organizations,* 5 (1), 219-230.

Hoyes, R., & Cuskelly, G. (2004). Board member selection, orientation and evaluation: implications for board performance in member-benefit voluntary sport organisations. *Third Sector Review,* 10 (1), 77-100. https://doi.org/10.5465/amr.1990.4308156

Huth, C. (2018). Back to traditional stadium names: Fans' role in financing naming rights through crowdfunding. *Sport, Business and Management: An International Journal*.

Kesenne, S. (2015). Revenue Sharing and Absolute League Quality; Talent Investment and Talent Allocation. Scottish Journal of Political Economy, 62, 1, 51-58. https://doi-org/10.1111/sjpe.12062

Kesenne, S. (2000). Revenue Sharing and Competitive Balance in Professional Team Sports. Journal of Sports Economics. 1 (1), 56-65. https://doi.org/10.1177/152700250000100105

ICC. (2017). Available online. https://www.icc-cricket.com/news/299451. (accessed 23rd September 2020).

ICC Annual Report. (2019). Available online. https://resources.pulse.icc-cricket.com/ICC/document/2020/04/30/04d18758-68a4-47f1-8f28-d8acdc78c0ef/ICC-Consolidated-Financial-Statements-31-December-2019.pdf. (accessed 26th August 2020).

Leach, S., & Szymanski, S. (2015). Making Money Out of Football. *Scottish Journal of Political Economy,* 62 (1), 25-49. https://doi.org/10.1111/sjpe.12065

Leopkey, B., & Parent, M. (2015). Stakeholder perspectives regarding the governance of legacy at the Olympic Games. Annals of Leisure Research, 18 (4), 528-548. https://doi.org/10.1080/11745398.2015.1092388

Medcof, J. (2000). The resource-based view and transnational technology strategy**.** *The Journal of High Technology Management Research,* 11 (1), 59-74. https://doi.org/10.1016/S1047-8310(00)00021-3

Meiklejohn, T., Dickson, G., & Ferkins, L. (2016). The formation of interorganisational cliques in New Zealand rugby. *Sport Management Review*, 19 (3), 266-278. https://doi.org/10.1016/j.smr.2015.08.002

Millar, R., Plumley, D., & Wilson, R. (2020). Available online. https://theconversation.com/english-cricket-threatened-as-summer-game-hit-by-pandemic-136333. (accessed on 25th September 2020).

Mishra, D., Heide, J., Cort, S. (1998). Information asymmetry and levels of agency relationships. *Journal of Marketing Research*, 35 (3), 277–295. https://doi.org/10.1177/002224379803500301

NZC Annual Report. (2019). Available online. http://epublishbyus.com/ebook/10048881/html/index.html . (accessed 26th August 2020).

Oliver, C. (1990). Determinants of Interorganizational Relationships: Integration and Future Directions. *Academy of Management Review,* 15 (2), 241-265. https://doi.org/10.5465/amr.1990.4308156

Pfeffer, J. (1987). Intercorporate Relations. A resource dependence perspective on intercorporate relations.

Pfeffer, J., & Salancik, G. (2003). The external control of organizations: A resource dependence perspective. Stanford University Press.

Pfeffer, J., & Salancik, G. (1978). The external control of organizations: A resource dependence perspective. Harper & Row.

Plumley, D., Wilson, R., Millar, R., & Shibli, S. (2019). Howzat? The Financial Health of English Cricket: Not Out, Yet. *International Journal of Financial Studies*, 7 (1), 1-17. https://doi.org/10.3390/ijfs7010011

Plumley, D., Wilson, R., & Shibli, S. (2017). A holistic performance assessment of English Premier League football clubs 1992-2013. *Journal of Applied Sport Management, 9 (1).* http://doi.org/10.18666/JASM-2017-V9-I1-7353

Ponikvar, N., Tajnikar, M., & Pušnik, K. (2009). Performance ratios for managerial decision-making in a growing firm. *Journal of Business Economics and Management*, 10 (2), 109-120. https://doi.org/10.3846/1611-1699.2009.10.109-120

Provan, K., & Kenis, P. (2008) Modes of Network Governance: Structure, Management, and Effectiveness. *Journal of Public Administration Research and Theory Advance Access,* 18 (2), 229-252. https://doi.org/10.1093/jopart/mum015

Robinson, L., Chelladurai, P., Bodet, G., & Downward, P. (2013). *Routledge Handbook of Sport Management* (1st ed.) Routledge (Chapter 4).

Shibli, S., & Wilkinson-Riddle, J. (1997). The financial health of English cricket: An analysis based upon the 1995 annual reports and financial statement of the 18 first class counties. *Journal of applied accounting research,* 4 (1), 4-37.

Siddiqui, J., Yasmin, S., & Humphrey, C. (2019). Stumped! The limits of global governance in a commercialized world of cricket. *Accounting, Auditing & Accountability Journal,* 32 (7), 1898-1925. https://doi.org/10.1108/AAAJ-07-2018-3571

Sloane, P. (2015). The Economics of Professional Football Revisited. *Scottish Journal of Political Economy,* 62 (1), 1-7. https://doi.org/10.1111/sjpe.12063

Sloane, P. (2006). Rottenberg and the Economics of Sport after 50 Years: An Evaluation. In Sports Economics after 50 Years; Essays in Honour of Simon Rottenberg; Spain: University of Oviedo, 211–226. SSRN: https://ssrn.com/abstract=918719

Sloane, P. (1971). The Economics of Professional Football: The Football Club As a Utility Maximiser. *Scottish Journal of Political Economy,* 18 (2), 121-146. https://doi.org/10.1111/j.1467-9485.1971.tb00979.x

Sueyoshi, T. (2005). Financial Ratio Analysis of the electric power industry. *Asia-pacific Journal of Operational Research,* 22 (3), 349-376. https://doi.org/10.1142/S0217595905000509

Szymanski, S. (2003). The Economic Design of Sporting Contests. *Journal of Economic Literature,* 41 (4), 1137-1187. https://doi.org/10.1257/002205103771800004

Szymanski, S., & Zimbalist, A. (2005). National Pastime: How Americans Play Baseball and the Rest of the World Plays Soccer. Washington: Brookings Institution Press.

Telegraph. (2018). Available online. https://www.telegraph.co.uk/cricket/2018/03/28/ecb-review-25m-glamorgan-payment-following-two-resignations/. (accessed 7th July 2020).

Telegraph. (2016). Available online. https://www.telegraph.co.uk/cricket/2016/05/18/ecb-chairman-seeks-tv-deal-to-sustain-sport-for-next-10-to-15-ye. (accessed 7th July 2020).

The Hundred. (2020). Available online. https://www.thehundred.com/info. (accessed 22nd August 2020).

Vos, S., Breesch, D., Kesenne, S., Hoecke, J., Vanreusel, B., & Scheerder, J. (2011). Governmental subsidies and coercive pressures. Evidence from sport clubs and their resource dependencies. *European Journal for Sport and Society*, 8 (4), 257-280. https://doi.org/10.1080/16138171.2011.11687882

Vrooman, J. (2015). Sportsman Leagues. *Scottish Journal of Political Economy,* 62, 1, 90-115. https://doi.org/10.1111/sjpe.12066

Wicker, P., & Breuer, C. (2011). Scarcity of resources in German non-profit sport clubs. *Sport Management Review,* 14 (2), 188-201. https://doi.org/10.1016/j.smr.2010.09.001

Wicker, P., & Breuer, C. (2013). Understanding the importance of organizational resources to explain organizational problems: Evidence from nonprofit sport clubs in Germany. *Voluntas: International Journal of Voluntary and Nonprofit Organisations*, *24*(2), 461–484. https://doi.org/10.1007/s11266-012-9272-2

Wicker, P., & Breuer, C. (2015). How the economic and financial situation of the community affects sport clubs' resources: Evidence from multi-level models. *International Journal of Financial Studies*, *3*(1), 31–48. https://doi.org/10.3390/ijfs3010031

Williams, P. (2012). Any given Saturday: competitive balance in elite English rugby union. *Managing Leisure,* 17 (3), 88-105. https://doi.org/10.1080/13606719.2012.674388

Wilson, R., Plumley, D., Mondal, S., & Parnell, D. (2020). Challenging parachute payments and unmasking English football's finances. *Managing Sport and Leisure*. https://doi.org/10.1080/23750472.2020.1792745

Wilson, R., Ramchandani, G., & Plumley, D. (2018). Parachute payments in English football: Softening the landing or distorting the balance?. *Journal of Global Sport Management*, 3 (4), 351-368. http://doi.org/10.1080/24704067.2018.1441740

Wilson, R., & Plumley, D. (2017). Different shaped ball, same financial problems? A holistic performance assessment of English Rugby Union (2006-2015). *Sports, Business and*

Management: An International Journal, 7 (2). http://doi.org/10.1108/SBM-10-2016-0063

Wilson, R., Plumley, D., & Barrett, D. (2015). Staring into the abyss? The state of UK rugby's Super League. *Managing Sport and Leisure,* 20 (6), 293-310. https://doi.org/10.1080/23750472.2016.1141367

Wäsche, H., & Gerke, A. (2019). Research Handbook on Sport Governance (1st ed). Edward Elgar (Chapter 13).

XE (2020). Available online. https://www.xe.com/currencycharts/. (accessed 14th August 2020).

Figures List

Tables List

Table I: Example of Currency Conversion

Financial metric	Surrey CCC		Cricket New South Wales	
	£	**Aus $**	**Aus $**	**£**
Turnover	31,665	56,736	50,122	27,701
Turnover – Annual Grants	29,487	52,834	15,409	8,516
Profit (Loss) Pre-Taxation	2,755	4,936	893	494
Profit (Loss) After- Taxation	2,006	3,594	893	494

Note: All figures '000. Conversion Rate (£ to Aus $) from 1st February 2018 to 31st January 2019 = **1.7918.** Conversion Rate (Aus $ to £) from 1st July 2018 to 30th June 2019 = **0.5526**

Table II: English and Australian Test Stadium Capacities

Australia			**England**		
STCA	**Stadium**	**Capacity**	**CCC**	**Stadium**	**Capacity**
Victoria	Melbourne Cricket Ground	100,224	Middlesex	Lords	30,000
Western Australia	Optus Stadium	60,000	Lancashire	Old Trafford	26,000
South Australia	Adelaide Oval	53,583	Surrey	The Oval	25,550
New South Wales	Sydney Cricket Ground	48,000	Hampshire	The Rose Bowl	25,000
Queensland	Gabba	36,000	Warwickshire	Edgbaston	24,803
Tasmania	Bellerive Oval	19,500	Yorkshire	Headingley	18,350

Table III: Annual Average Turnover, Profit and Debt per CCC 2014-2018

	2014	2015	AV* (%)	2016	AV* (%)	2017	AV* (%)	2018	AV* (%)	SV** (%)
Turnover (£'000)	7,582	8,484	12	7,840	-8	9,333	19	8,995	-4	19
Profit (£'000)	-87	877	1105	-228	-126	624	374	-107	-117	-22
Debt Ratio (%)	72	67	-8	69	4	66	-4	68	2	-6

* Annual Variance ** Sample Variance

Table IV: Annual Average Turnover, Profit and Debt per STCA 2015-2019

	2015	**2016**	**AV* (%)**	**2017**	**AV* (%)**	**2018**	**AV* (%)**	**2019**	**AV* (%)**	**SV** (%)**
Turnover (£'000)	16,133	17,578	**9**	21,946	**25**	24,399	**11**	22,948	**-6**	**46**
Profit (£'000)	1,097	2,932	**167**	2,207	**-25**	615	**-72**	154	**-75**	**-43**
Debt (%)	32	29	**-8**	30	**2**	31	**4**	35	**12**	**5**

* Annual Variance ** Sample Variance

Table V: ECB and CA Turnover 2014-2019

ECB			CA		
Year	**Revenue (£m)**	**Touring Teams**	**Year**	**Revenue (£m)**	**Touring Teams**
2014	**174**	**India** Sri Lanka	**2015**	**202**	**India** South Africa England 50-over World Cup
2015	**133**	**Australia** New Zealand	**2016**	**167**	**New Zealand** West Indies India
2016	**118**	**Pakistan** Sri Lanka	**2017**	**186**	**South Africa** Pakistan Sri Lanka New Zealand
2017	**125**	**South Africa** West Indies Champions Trophy	**2018**	**229**	**England** New Zealand
2018	**172**	**India** Pakistan Australia	**2019**	**268**	**India** Sri Lanka New Zealand

Table VI: ECB and CA Debt Ratio 2014-2019

	2014	2015	2016	2017	2018	2019
ECB	**29%**	**31%**	**63%**	**90%**	**91%**	**N/A**
CA	**N/A**	**58%**	**60%**	**69%**	**68%**	**59%**

Figure 1: Structure of ECB and CA Federated Network

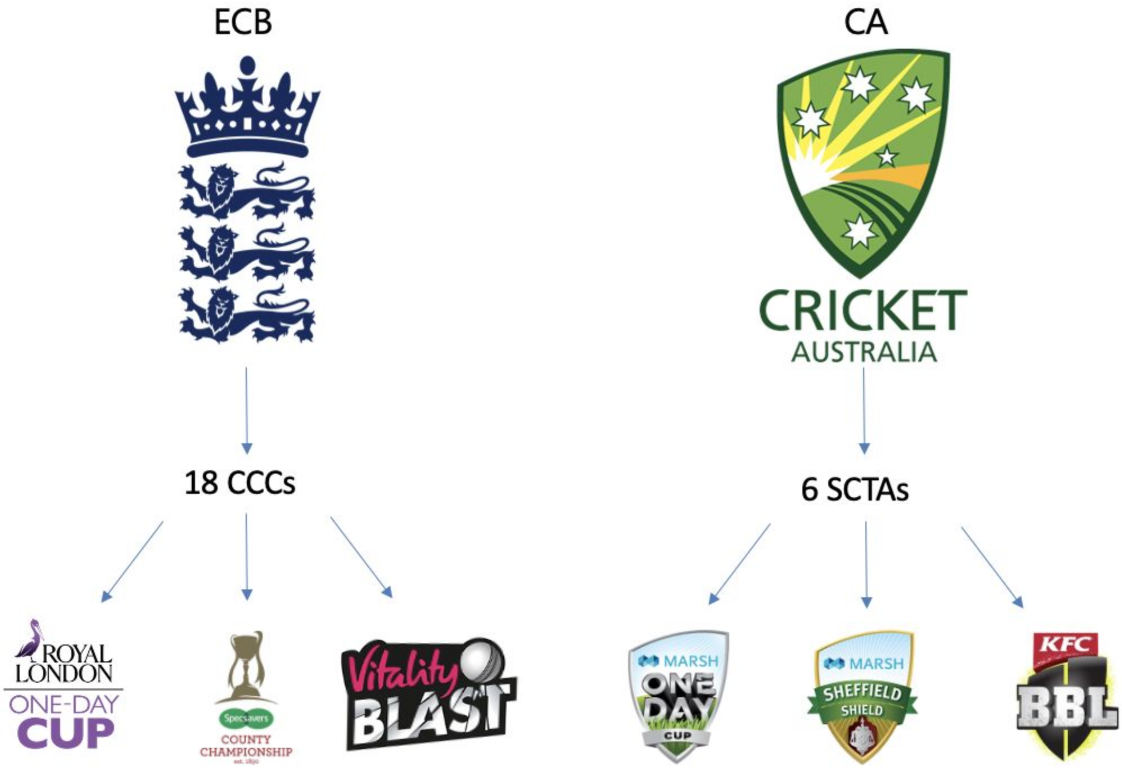


Figure 2: Average Turnover of ECB and CA Member Organisations: 2014-2019

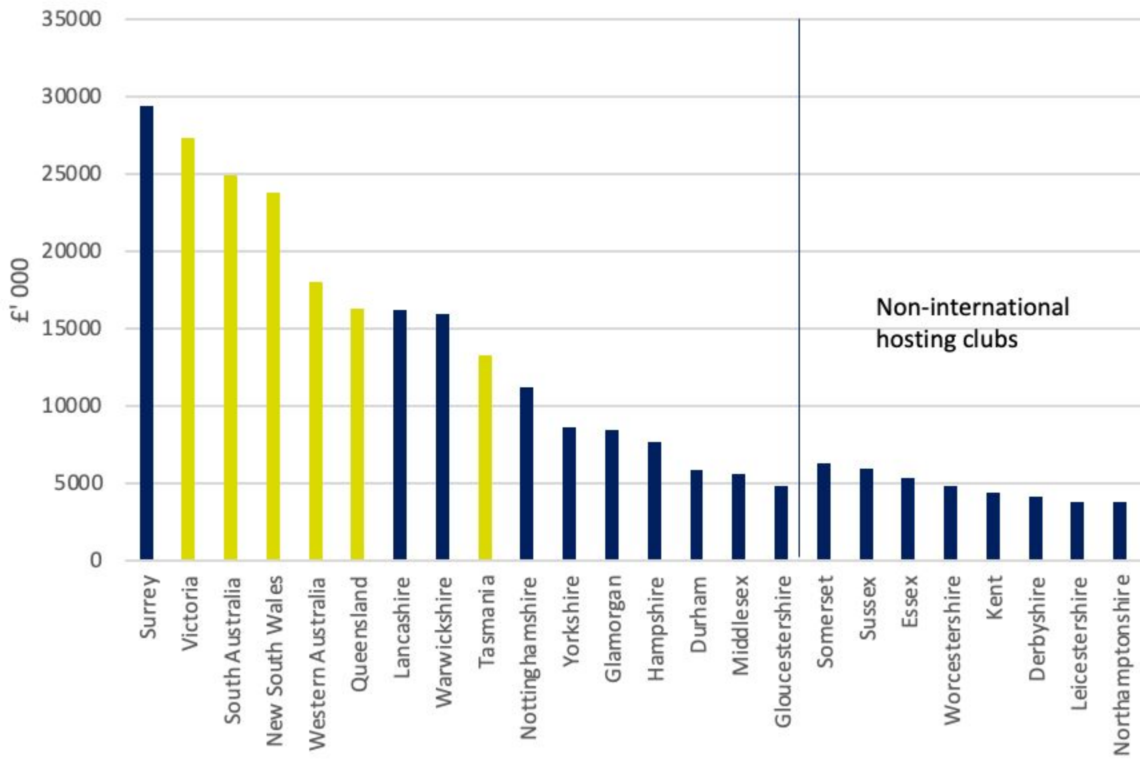


Figure 3: Combined Revenue of ECB and CA Member Organisations 2014-2019

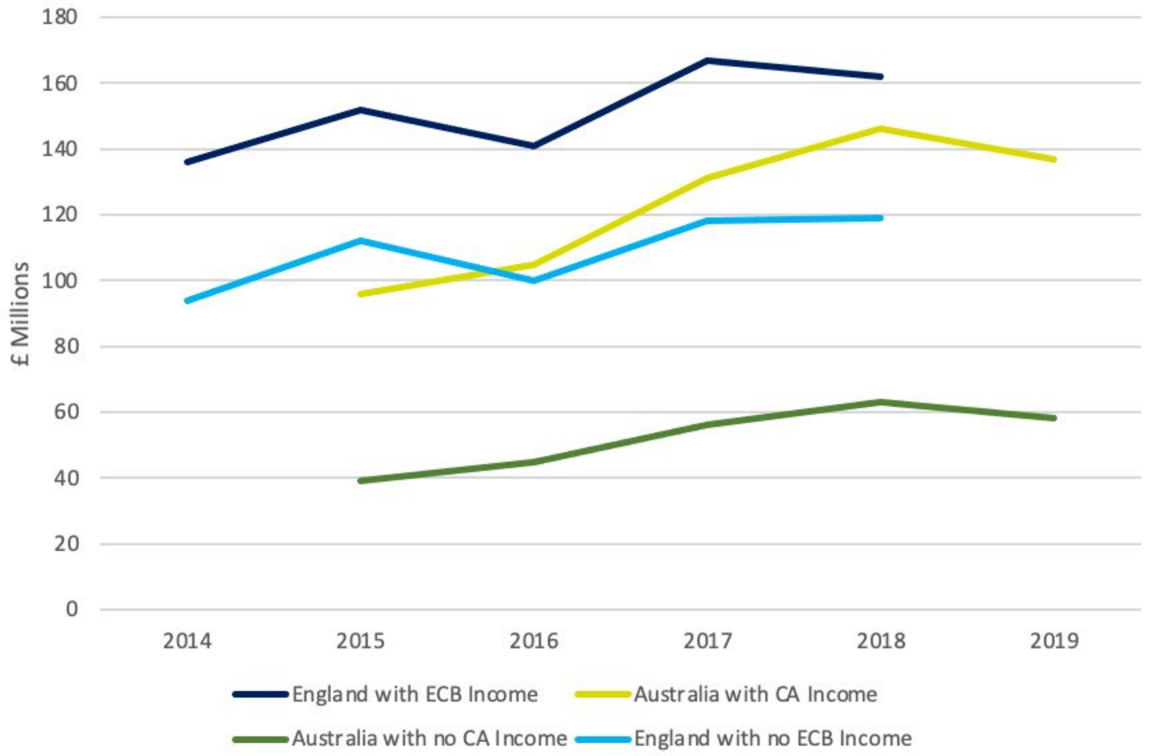


Figure 4: Revenue Sources 2014-2019 - ECB and CA Member Organisations

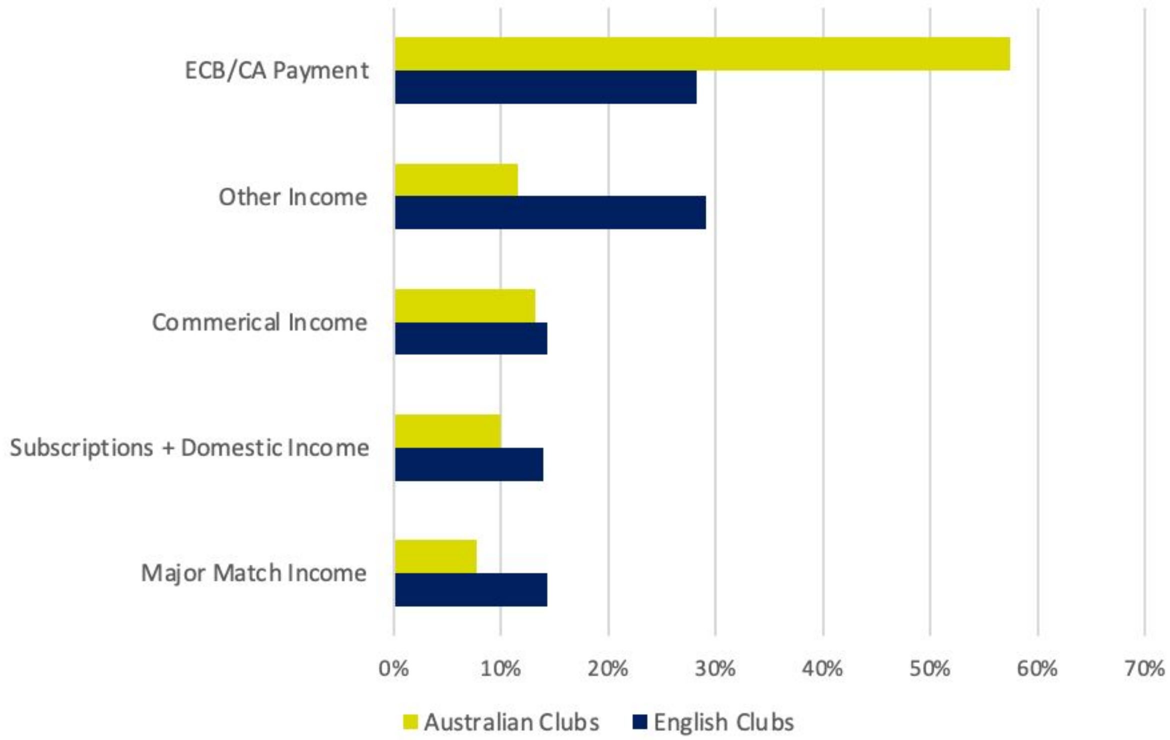


Figure 5: Average Profit/(Loss) 2014-2019: ECB and CA Member Organisations

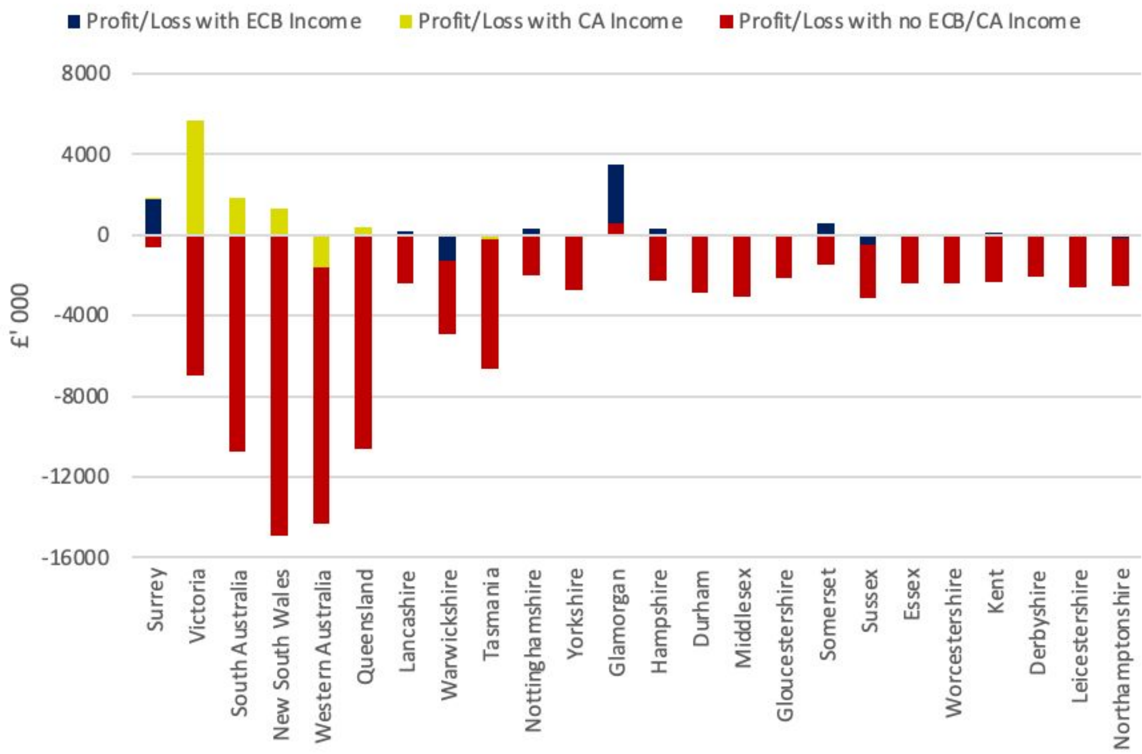


Figure 6: ECB and CA Member Organisation's Average Debt Ratio 2014-2019

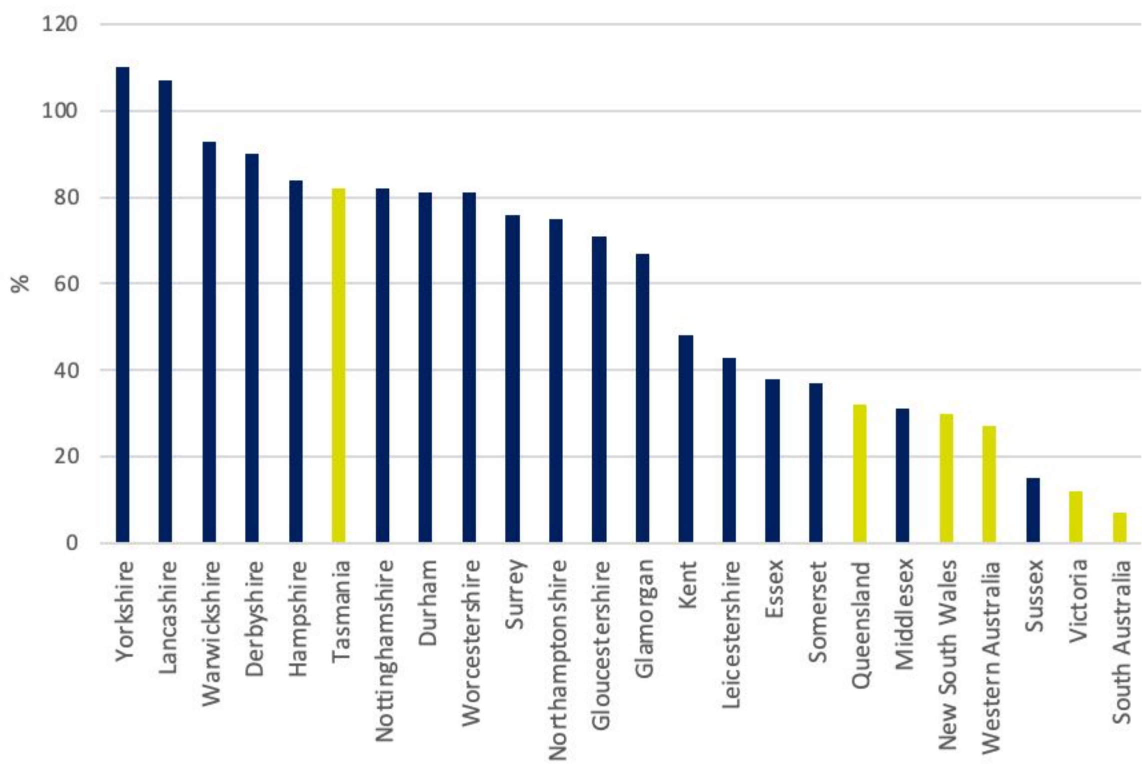
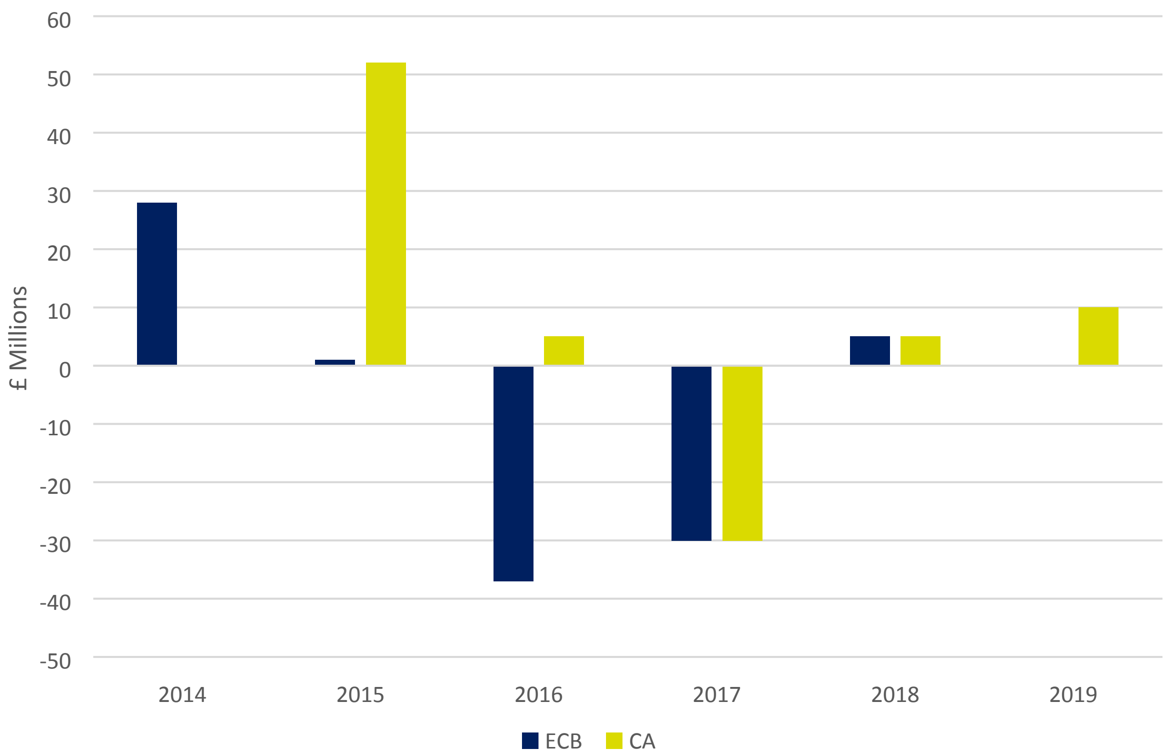


Figure 7: Profit/(Loss) of ECB and CA 2014-2019



Federated networks in England and Australia Cricket: A Model of Economic Dependency and Financial Insecurity

Robbie Millar[1], Dr Daniel Plumley[2], Dr Rob Wilson[2] and Dr Geoff Dickson[3]

Sheffield Hallam University, UK
[1]Sport Industry Research Centre, [2]Sheffield Business School

La Trobe University, Australia
[3]La Trobe Business School

Robbie Millar*
A118 Collegiate Hall
Sheffield Hallam University
Collegiate Crescent
Sheffield
S10 2BP
United Kingdom
Email: r.millar@shu.ac.uk
Tel: +44 (0) 114 225 4340
Orchid ID: 0000-0002-7498-3586

Dr Daniel Plumley
Sheffield Business School
Sheffield Hallam University
Howard Street
Sheffield
S1 1WB
United Kingdom
Email: d.j.plumley@shu.ac.uk
Tel: +44 (0) 114 2255499
Orchid ID: 0000-0001-7875-0969

Dr Rob Wilson
Sheffield Business School
Sheffield Hallam University
Howard Street
Sheffield
S1 1WB
United Kingdom
Email: r.j.wilson@shu.ac.uk
Tel: +44 (0) 114 2253981
Orchid ID: 0000-0002-9657-7570

Dr Geoff Dickson
La Trobe Business School
La Trobe University
Plenty Road & Kingsbury Drive
Bundoora
Victoria
3086
Australia
Email: g.dickson@latrobe.edu.au
Orchid ID: 0000-0002-9913-0125

*Corresponding Author

No potential conflict of interest was reported by the authors.