

Macquarie Point Multipurpose Stadium

Public Hearing Technical Note

Technical Note Number	14
Subject	Tourism Data
Date	14 July 2025

1. Background

- 1.1 On 26 June 2025, during the course of representations made by Marnie Craig on behalf of Business Events Tasmania and Amy Hills on behalf of the Tourism Industry Council Tasmania, questions were raised by the Commission around the number of patrons to AFL games at Ninja Stadium and UTAS Stadium. In particular, questions were raised regarding:
- (a) further data for visitations and number of patrons to AFL games at Ninja Stadium and UTAS Stadium;
 - (b) number of interstate visitors; and
 - (c) any data that verifies whether the 89% of interstate visitors that state that they intend to return to Tasmania, do ultimately return.
- 1.2 This Technical Note 14 sets out data provided by PwC regarding total economic contribution of Hawthorn Football Club's games played in Northern Tasmania to the Tasmanian economy in 2022. **(PwC Report) (Attachment 1).**
- 1.3 This Technical Note 14 also sets out data provided by the North Melbourne Football Club with respect to games played at Ninja Stadium in 2023 and 2024.

2. Data on visitations and number of patrons to AFL games at UTAS Stadium

- 2.1 With respect to the 56,563 spectators who attended AFL games at UTAS Stadium in 2022:
- (a) 21,318 (38%) resided in Launceston or nearby suburbs;
 - (b) 26,282 (46%) resided in Tasmania, but not in Launceston or nearby suburbs; and
 - (c) 9,053 (16%) resided interstate or overseas.
- 2.2 With respect to attendee expenditure for spectators who attended AFL games at UTAS Stadium in 2022:
- (a) those who resided in Launceston or nearby suburbs averaged \$89 (an increase from \$41 in 2017);
 - (b) those who resided in Tasmania, but not in Launceston or nearby suburbs, averaged \$309 (an increase from \$244 in 2017); and
 - (c) those who resided interstate or overseas averaged \$1,074 (an increase from \$816 in 2017).
- 2.3 With respect to interstate or overseas attendance and night spent away from home, the PwC Report identified that 35% of spectators stayed one or two nights, with only 4% choosing to arrive and return on the day of the game. On average, attendees spent an average of 4.2 nights away in Tasmania during their trip to watch a game at UTAS Stadium, an increase from 3.7 nights in 2017. Further, attendees who stayed for three nights or longer spent 3.8 times more than those who stayed for shorter lengths in 2022.

3. Economic impacts of AFL games at UTAS Stadium

- 3.1 The PwC Report identified an economic impact of AFL games at UTAS Stadium to be \$20.8 million including:
- (a) \$3.1 million from transport expenditure;
 - (b) \$5.4 million from accommodation expenditure;
 - (c) \$6.1 million from food and drinks expenditure;
 - (d) \$2.0 million from entertainment and activities expenditure;
 - (e) \$2.2 million from shopping expenditure;
 - (f) \$0.9 million from other expenditure; and
 - (g) \$1.1 million from expenditure by the Hawthorn Football Club and opposition sides in Tasmania.
- 3.2 In addition to the \$20.8 million in direct expenditure, a further \$2.8 million in indirect value was created, a total of \$23.6 million in total impacts to the Tasmanian economy from direct and indirect GSP across Australia, a total 96 direct and indirect jobs were supported as and a \$6.9 million increase in household consumption.

4. The number of interstate visitors

- 4.1 The PwC Report identified that 9,100 visitors to the Hawthorn Football Club matches at UTAS Stadium were from interstate or overseas, 68% of which identified the football match as the primary purpose of visiting Launceston.
- 4.2 The North Melbourne Football Club provided data from pre-game Ticketek transactions from customers made outside of Tasmania (those with a non-7000 postcode) in 2023 and 2024. This identified a minimum of:
- (a) 5,106 interstate attendees in 2023; and
 - (b) 5,226 interstate attendees in 2024.
- 4.3 It is important to note that these figures do not account for additional interstate visitors that would be captured in circumstances where:
- (a) interstate visitors who buy a ticket at the stadium (i.e. not pre-purchased);
 - (b) travelling club representatives, partners and parents; and
 - (c) corporate hospitality ticket holders (which do not capture postcode data).

5. Returned visitor data

- 5.1 Events Tasmania is currently undertaking a study for AFL games from the 2025 season, however, this information has not been completed yet. Therefore, this information is not available at this time.

Attachment 1 –The Economic Impact of Hawthorn Football Club Matches in Northern Tasmania (PWC, October 2022)

The Economic Impact of Hawthorn Football Club Matches in Northern Tasmania

October 2022



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Executive summary

PwC was engaged to estimate the total economic contribution of Hawthorn Football Club's games played in Northern Tasmania to the Tasmanian economy in 2022. These games were:

- Pre-season: Hawthorn v Richmond - Tuesday, 5 April 2022
- Round 6: Hawthorn v Sydney Swans - Monday, 25 April 2022
- Round 10: Hawthorn v Brisbane Lions - Sunday, 22 May 2022
- Round 21: Hawthorn v Gold Coast Suns - Saturday, 6 August 2022
- Round 23: Hawthorn v Western Bulldogs - Sunday, 21 August 2022.

This study is an update to the report developed by PwC in 2017, "Estimation of the economic contribution of Hawthorn Football Club 2017 games in Launceston to the Tasmanian economy". The evaluation quantifies both the direct impacts of expenditure by game attendees and the participating clubs, as well as the indirect flow on impacts of that expenditure to the Tasmanian economy.



Analysis of expenditure by residential origin of the spectator reveals that almost 50% of spending is by interstate attendees



Launceston



Tasmania (other)



Interstate or international

Key: **Higher** / **Lower** than results from PwC's 2017 study

Attendance	21,300	26,300	9,100
Expenditure per person	\$90	\$310	\$1,070
Total expenditure	\$1.9m	\$8.1m	\$9.7m



Survey data and club financial data shows \$20.8m in direct expenditure resulting from AFL matches in Northern Tasmania

\$19.7m

Direct match attendee spend



+

\$980k

Hawthorn Football Club direct spend



+

\$80k

Assumed opposition club direct spend



=

\$20.8m

Total direct expenditure



Economic modelling estimates \$23.6m in total impacts to the Tasmanian economy from direct expenditure

\$23.6m

direct and indirect GSP across Australia



96

direct and indirect jobs supported across Australia



\$6.9m

household consumption across Australia



Comparison to 2017

Total direct expenditure rose by 2 per cent, from \$20.4m in 2017 to \$20.8m in 2022. However, the \$23.6m total contribution to GSP in 2022 is 21 per cent lower than the \$28.5m total impact in 2017.

This can be explained by considering the broader Tasmanian economy, which grew by 17 per cent rise over the same period (measured by the consumer price index (CPI)). Direct expenditure grew at a slower rate than CPI, which leads to smaller indirect impacts, due to:

1. Lower average attendance at AFL games in Launceston and across the league
2. Smaller proportion of interstate or overseas attendees, who have a higher spend profile.

1

Direct impacts



We surveyed patrons of HFC's Launceston matches to understand the impact of their spending

Approach

In order to collect expenditure data, email addresses were requested from a sample of Launceston match day attendees, who were subsequently sent an electronic survey in the days following the match.

The survey asked questions primarily related to the amount spent by each participant, who they attended the game with, and what else they did in relation to their trip to the football game during their time in Launceston.

Expenditure data was collected in relation to:

- transport
- accommodation
- food and drinks
- entertainment and activities
- other expenditure.

In addition to the survey data, information was also sought from the Hawthorn Football Club on their own expenditure that is likely to flow to Tasmania, including the cost of accommodation, and food and drinks during games, as well as for other club trips during the year.

Step 1



Step 2



Step 3



Step 4



Understanding of Hawthorn Football Club's matches in Northern Tasmania

Developed and launched an online survey to capture activities of attendees at two matches at University of Tasmania Stadium in Launceston. The purpose of the survey was to determine the proportion of local, interstate and international visitors and their associated average spend profiles.

Attendance spending

The sample of match attendee information from the online survey was then extrapolated to the total number of match attendees across all games. Note that the pre-season game played against Richmond was held at Devonport Stadium. The attendee profile at the pre-season match held in Devonport is assumed to be the same as at the games in Launceston where survey data was collected. This provided us with an estimate of the total amount of local, interstate and international attendees and the total spending for each group.

Where the HFC game was indicated as only 'part' of the reason for their travel to Launceston, we attributed 50 per cent of their expenditure to the HFC game, and where it was a 'non-primary' reason for their travel, only 20 per cent was attributed.

Club expenditure

Match attendee expenditure was then combined with spend data from the Hawthorn Football Club and opposition sides. This included items such as advertising spend and security and also included travelling team spend (including support staff, accommodation and travel allowance).

Along with step 2, this provided total direct impact of HFC's matches in Northern Tasmania.

Total economic impacts (direct and indirect)

The total direct expenditures were then modelled using multipliers developed from a globally accepted robust computable general equilibrium (CGE) model. This assesses the indirect and total economic impacts from Hawthorn Football Club's matches in Northern Tasmania. Using multipliers developed through CGE analysis is superior to using input-output analysis and is the preferred approach of many Governments and Treasury Departments in Australia.

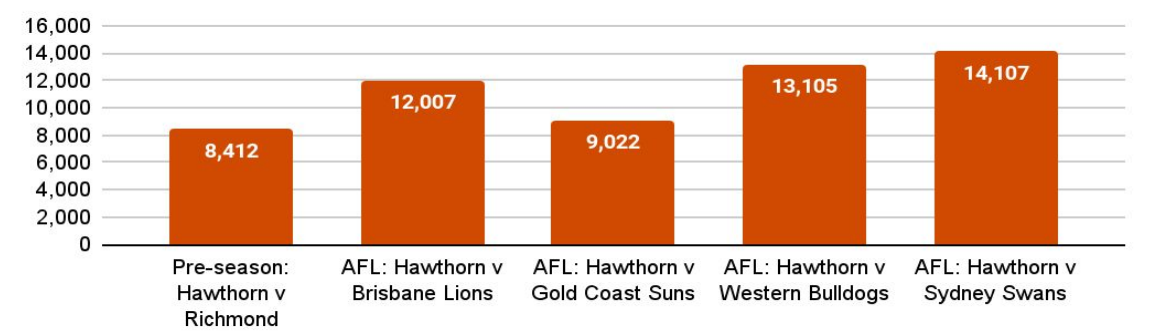
Further detail related to our methodology and approach can be found in the appendix. The key results of the economic impacts are presented in the following pages.

Around 16 per cent of the 57,000 attendees in 2022 travelled to the match from interstate or overseas

Match attendance

56,653 spectators attended Hawthorn Football Club’s five games in Northern Tasmania in 2022. This includes a pre-season AAMI Community Series match held at Devonport Stadium, attracting 8,412 spectators. The remainder of the matches were AFL home and away series games held at UTAS Stadium in Launceston. The number of attendances varied by game, with the highest crowd attending the Sydney Swans game (14,107), and the lowest crowd attending the game against Gold Coast Suns (9,022).

Figure 1: Attendance numbers by match



Source: Austadiums (2022), AFL Results and Crowds

2017 Comparison

Average attendance at UTAS Stadium matches are down 2 per cent from 2017. This is consistent with trends in crowd sizes across the AFL - average attendance in 2022 was 30,871, down 9 per cent from 2017.

Attendance at Hawthorn Football Club home games has fallen 20 per cent since 2017 as the the club’s on-field successes have slowed after AFL Premierships in 2013, 2014 and 2015.

This analysis considered price and supply flights as a factor contributing to lower attendances, but found no material change in average domestic air fares or the number of flights when comparing the winter months of 2017 and 2022.

Attendance by location of residence

While data is publically available on the total attendance of each game, there is no complete dataset available on the exact place of residence of each of the game attendees.

Email addresses of attendees to the Gold Coast Suns and Western Bulldogs games were collected to undertake a survey. A total of 194 correctly completed responses to the online survey were received and used to estimate the average spend by game attendees. This represented 1 per cent of game attendees at the two games where data was collected.

We can extrapolate the survey results to estimate the proportion (and therefore the number) of people that attended the games from:

- Launceston or nearby suburbs
- Tasmania, but not in Launceston or nearby suburbs, or
- interstate or overseas.

This results in the following estimates shown in the table below.

Table 1: Attendance numbers by location of residence

	Launceston or nearby suburbs	In Tasmania, but not in Launceston or nearby suburbs	Interstate or overseas	Total
Count of survey responses	73	90	31	194
Percentage (from survey results)	38%	46%	16%	100%
Assumed total attendances	21,318	26,282	9,053	56,653

Source: PwC survey of game attendees

According to the ABS (2015) there is a total of 5,104 guest nights available in Northern Tasmanian hotels, motels and serviced apartments each night, meaning there is sufficient accommodation for the estimated number of interstate and international visitors for any one game.

For the pre-season game held in Devonport, attendees from Devonport or nearby suburbs are captured as Launceston or nearby suburbs.

October 2022

Interstate attendees spend more on average than attendees from Tasmania

Attendee expenditure

Based on the survey results, the average amount spent in Tasmania by survey participants is estimated to be \$348. Note that where the HFC games were indicated ‘part’ of the reason for their travel to Launceston, we only attributed 50 per cent of their expenditure to the HFC game, and where it was a ‘non-primary’ reason for their travel, then only 20 per cent was attributed.

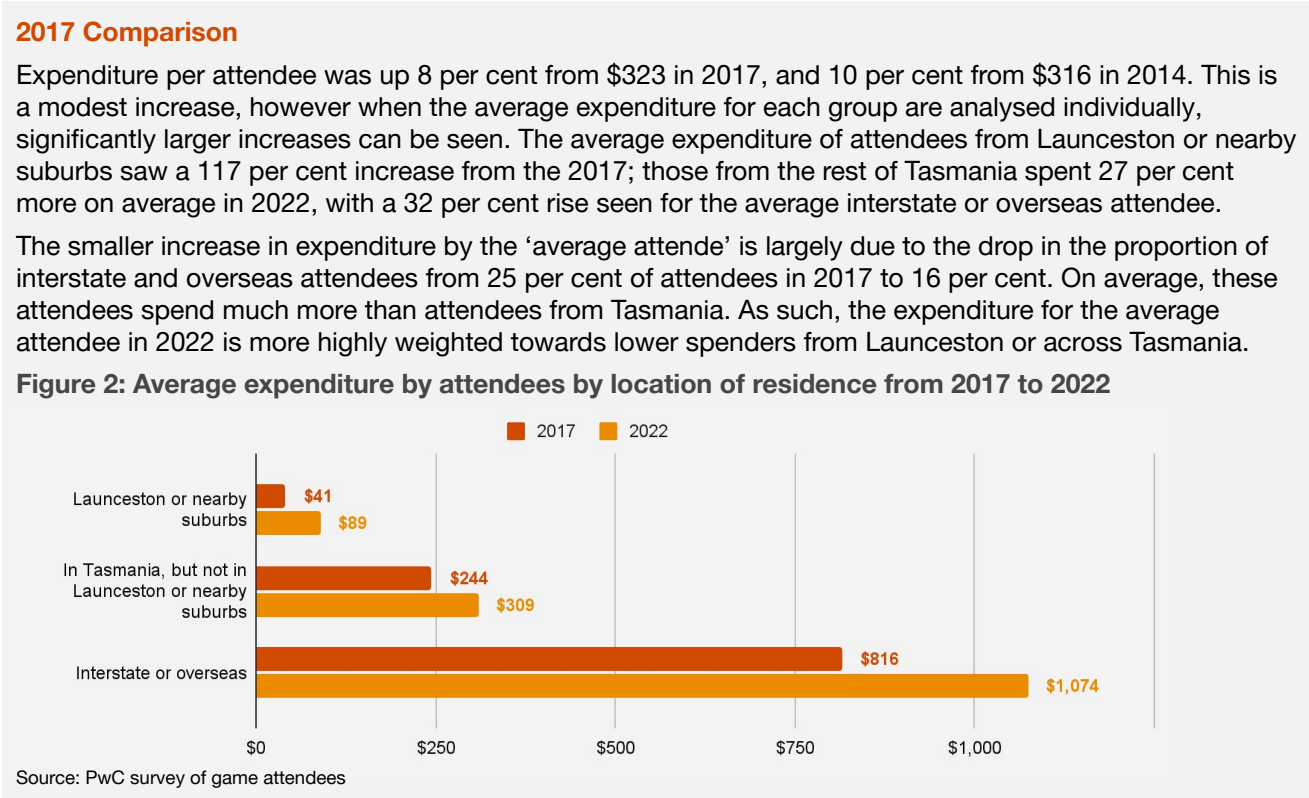


Table 2: Average expenditure by type of expenditure and location of residence

	Launceston or nearby suburbs	In Tasmania, but not in Launceston or nearby suburbs	Interstate or overseas	Average attendee
Transport (for example: taxis, public transport, car hire)	\$29	\$50	\$126	\$54
Accommodation	n/a	\$65	\$407	\$95
Food and drinks	\$60	\$87	\$279	\$107
Entertainment and activities (excluding admission to the AFL game)	n/a	\$35	\$118	\$35
Shopping	n/a	\$53	\$94	\$39
Other	n/a	\$19	\$49	\$16
Total	\$89	\$309	\$1,074	\$348

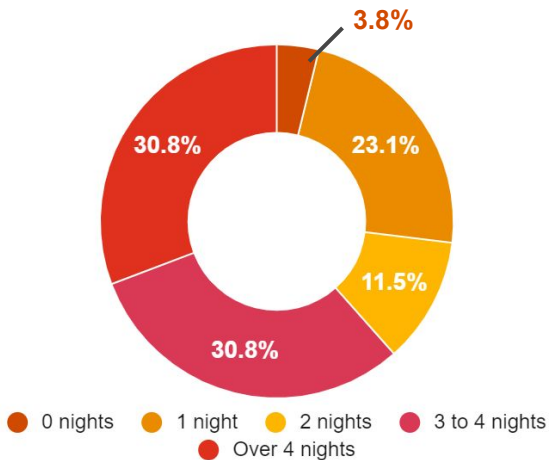
Source: PwC survey of game attendees

On average, interstate or overseas attendees spend over four nights away in Tasmania during their trip

Nights spent away from home

Of the spectators from interstate or overseas, 35 per cent stayed one or two nights, with only 4 per cent choosing to arrive and return on the day of the game (see Figure 3). This helps to drive the higher spend per person from interstate attendees (see Figure 5). On average, these attendees spent an average of 4.2 nights away in Tasmania during their trip to watch the game in Launceston. On average, attendees who stayed for three nights or longer spent over 3.8 times more than those with shorter stays (see Figure 4).

Figure 3: Breakdown of nights spent away from home for interstate or overseas attendees



Source: PwC survey of game attendees

2017 Comparison

In 2017, interstate and overseas travellers stayed an average of 3.7 nights away in Tasmania. This increase in 2022 is largely due to a rise in the number of individuals staying for longer than four nights, from 22 per cent of travellers to 31 per cent. There were no long weekends surrounding either of the matches where emails were collected, indicating that attendees were more likely to stay for longer than the weekend in 2022 to watch AFL matches in Launceston.

Figure 4: Average expenditure for interstate or overseas attendees by average nights spent away

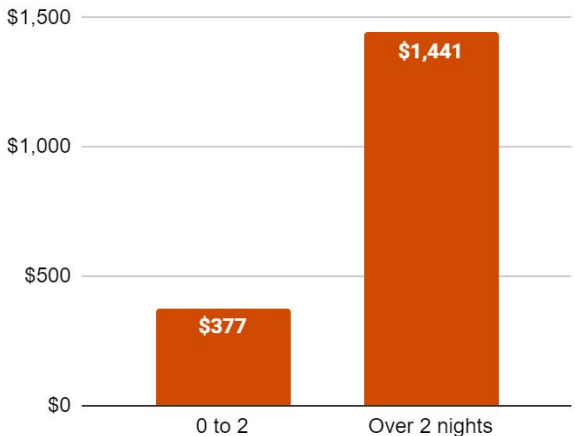
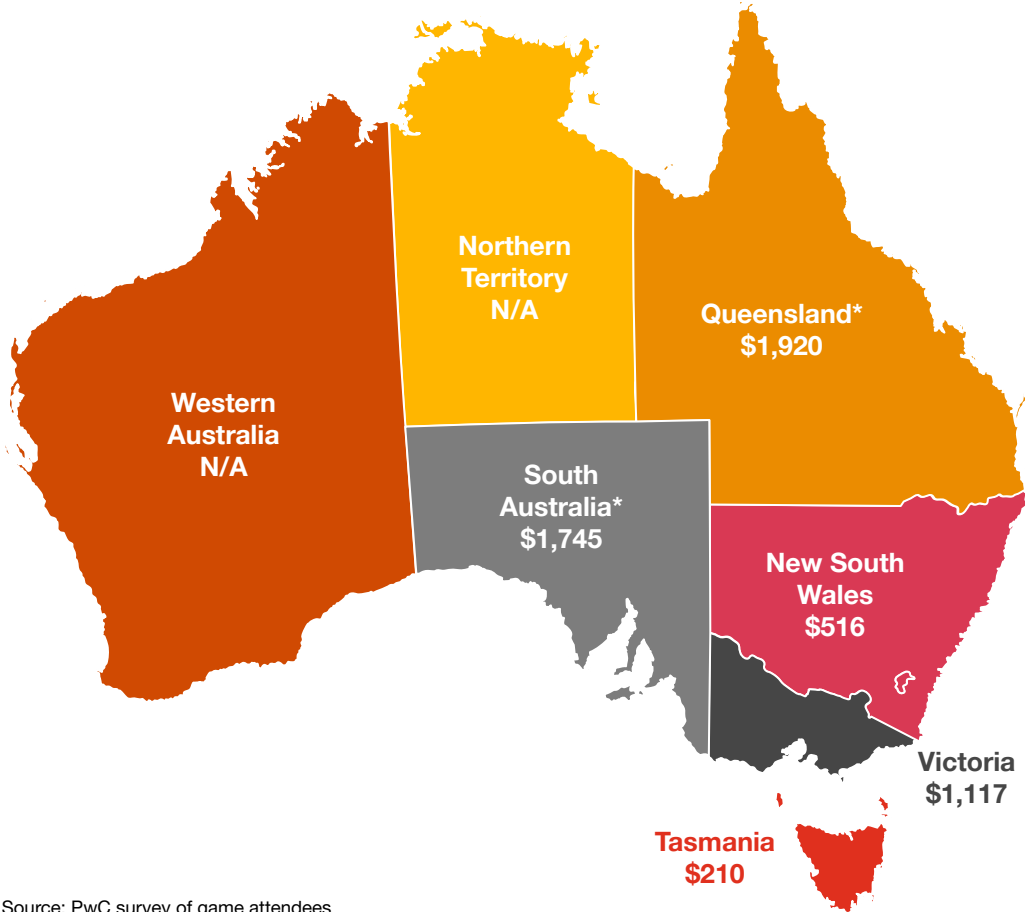


Figure 5: Breakdown of average expenditure by location of residence

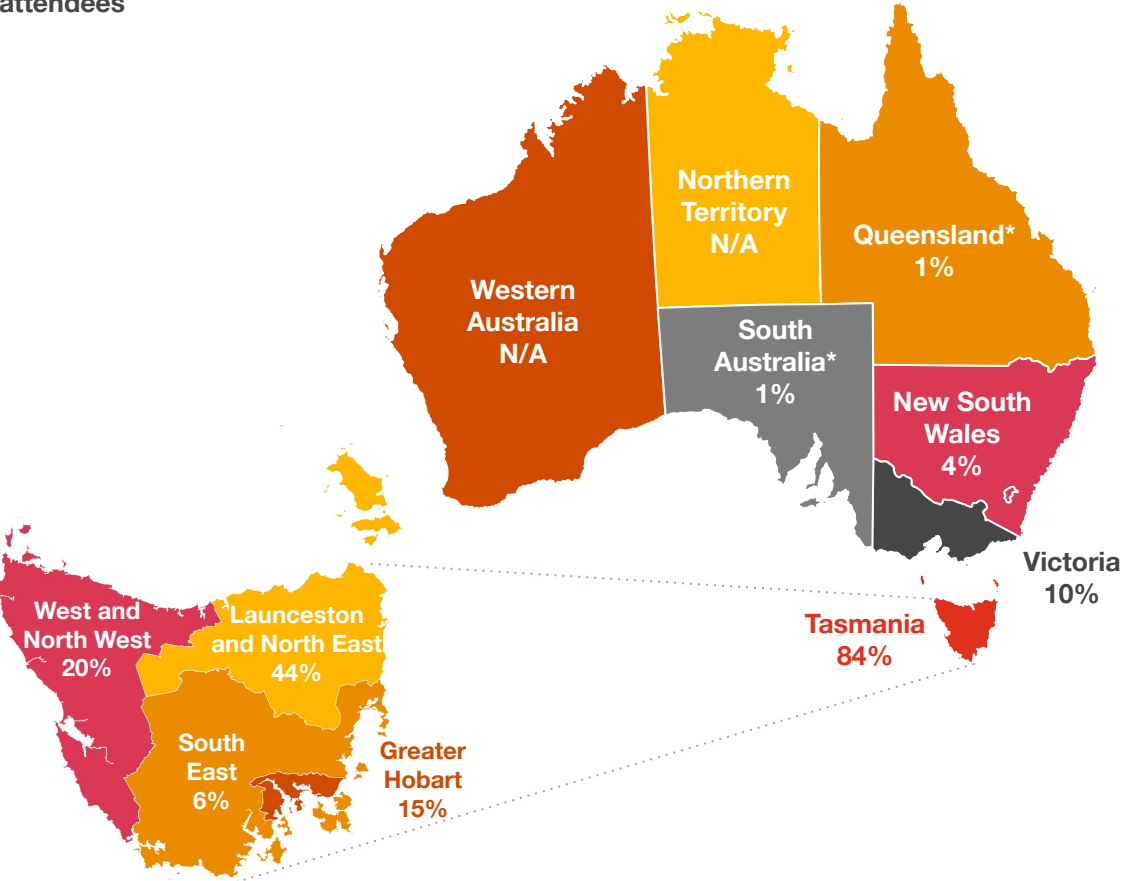


Source: PwC survey of game attendees

* Note: Only 2 survey responses were received from South Australia and Queensland

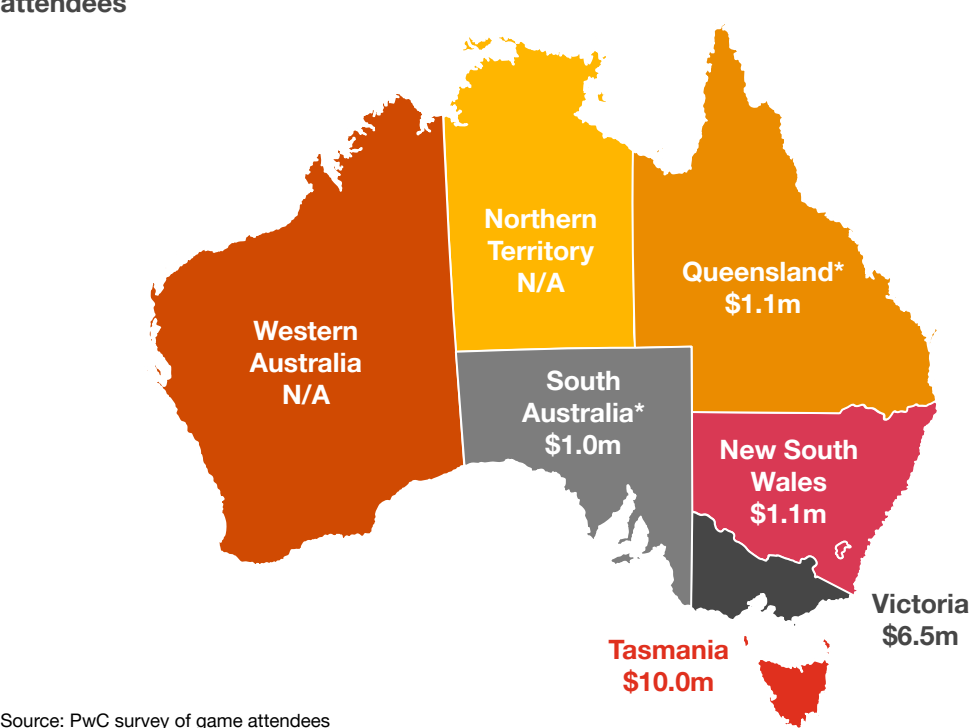
Although most attendees are from Tasmania, a large portion of expenditure is from interstate attendees

Figure 6: Breakdown of nights spent away from home for interstate or overseas attendees



Source: PwC survey of game attendees

Figure 7: Breakdown of nights spent away from home for interstate or overseas attendees



Source: PwC survey of game attendees
* Note: Only 2 survey responses were received from South Australia and Queensland

2017 Comparison

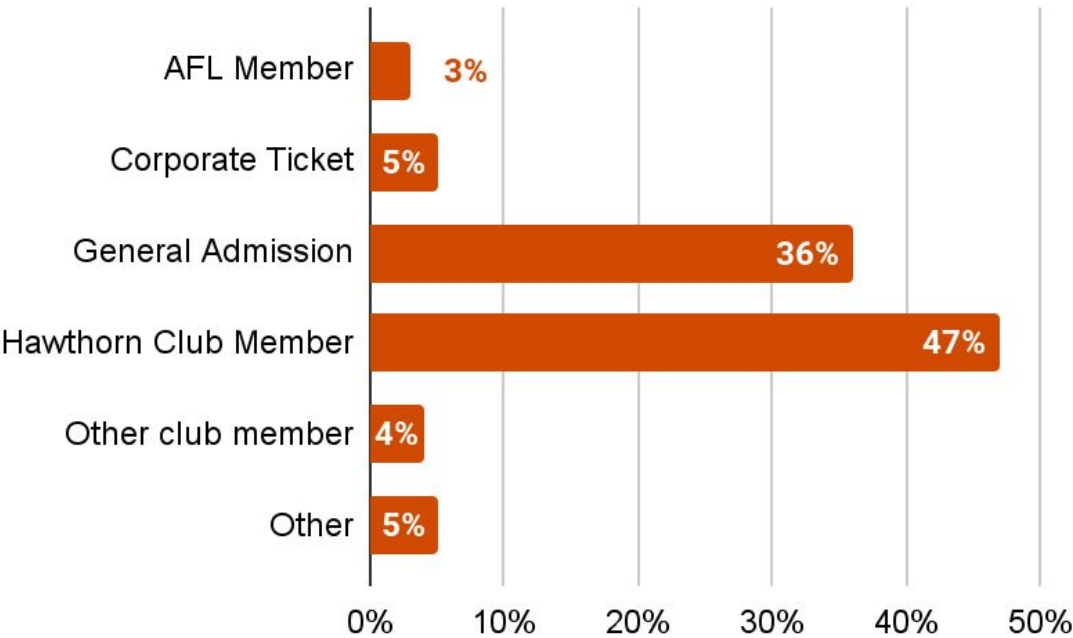
The spread of attendee expenditure was largely similar to that in 2017 across most states. The most significant difference occurred between Victoria and Tasmania. With the impacts of COVID-19 on travel, spending from Victorians fell from \$9.7 million to \$6.5 million, whilst expenditure from Tasmanians rose from \$7.3 million to \$10.0 million.

There was strong survey feedback and fan engagement surrounding the AFL matches held in Launceston

Ticket types

Just under half of survey respondents utilised their Hawthorn Football Club membership for entry, with the next most common entry ticket being General Admission, accounting for 36 per cent of all survey respondents. Opposition club memberships only accounted for 4 per cent of entries used at the two matches where emails were collected.

Figure 8: Ticket types



Source: PwC survey of game attendees

Social Media

Of those surveyed, 54 per cent of participants indicated that they shared their experience on social media. Over 60 per cent of those did so on multiple occasions. This result is even higher for attendees from interstate or overseas. For these attendees, 65 per cent shared their experience on social media, with 75 per cent of those doing so on multiple occasions.



Proportion of attendees sharing their experience on social media

Source: PwC survey of game attendees

Survey participant feedback

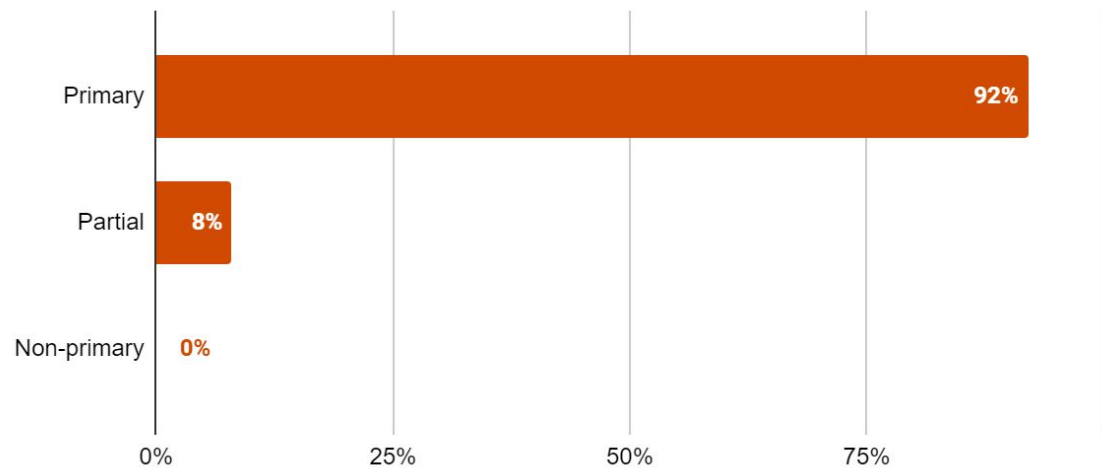
The vast majority of survey participant feedback was positive regarding both the match experience itself and the arrangement between Hawthorn Football Club and Tasmania. Provided below are two respondent's sentiments surrounding their experience at one of the matches in Launceston.

"Hawthorn is a major asset to Launceston. All the direct telecasts around the country puts Launceston in everyone's lounge room. The ultimate marketing. A major player for the economy. We will come back if they keep Hawthorn."

"Being a member for seven years and attending every match , losing AFL games at UTAS would be a great loss. It is something I look forward to. Always a great experience and beneficial for the state. Take that away and I would travel interstate rather than attend in Hobart. I attended there in Round 19 and found the experience nowhere near as enjoyable and as costly as it would have been if I had travelled to Melbourne to watch. Taking away UTAS games would mean a loss of spending from those in the NW of Tasmania."

The primary reason for the vast majority of attendees to travel to Launceston was to watch the game

Figure 9: Reason for travel - Tasmanians

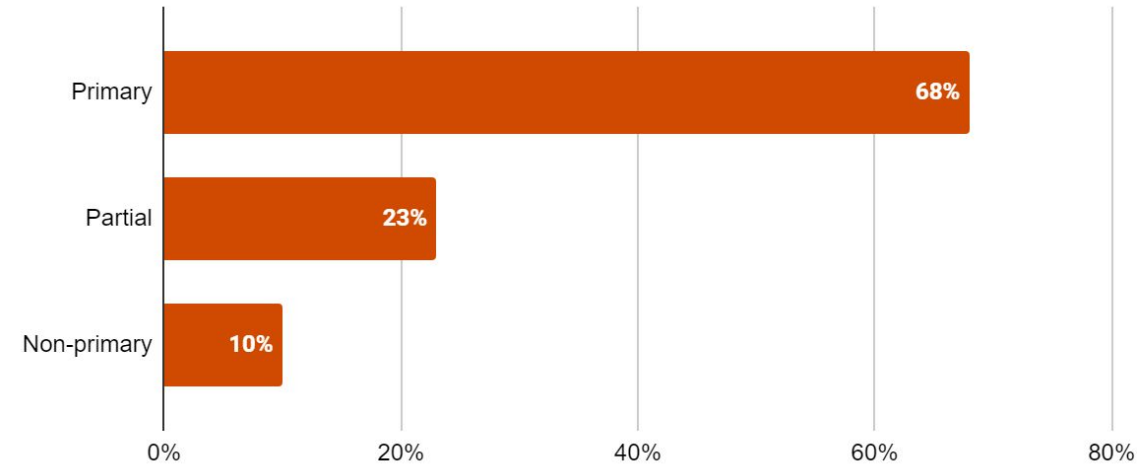


Source: PwC survey of game attendees

Reason for travel

The distribution of the primary reason for travel to Launceston varies for attendees residing in the rest of Tasmania and those from interstate or overseas. Over 90 per cent of the respondents from the rest of Tasmania indicated that the HFC match was their primary reason for their travel to Launceston. For those coming from interstate or overseas, 90 per cent of attendants travelled to Tasmania primarily or partially to watch the AFL match, with only 10 per cent indicating that the football was a non-primary reason for their travel. These results indicate that the matches are an important driver of tourism in Northern Tasmania from both other areas of the state, and Australia more broadly.

Figure 10: Reason for travel - Interstate or overseas



Source: PwC survey of game attendees

Impact on modelling

Where the Hawthorn Football Club games were indicated as only ‘part’ of the reason for their travel to Launceston, we attributed 50 per cent of their expenditure to the HFC game, and where it was a ‘non-primary’ reason for their travel, then only 20 per cent was attributed.

2017 Comparison

These results were similar to that in 2017, where 91 per cent of Tasmanians made the trip to Launceston for the AFL game primarily. For interstate or overseas attendees, 72 per cent chose the AFL match as their primary reason for their trip, with only 5 per cent indicating it was as their non-primary reason.

Food and drink and accommodation expenditure accounted for over half of the \$19.7m in total spending by attendees

Direct expenditure

The direct expenditure flowing to Tasmania as a result of the five Hawthorn Football Club in Northern Tasmania in 2022 is estimated at around **\$19.7 million**.

A breakdown of spending by expenditure type and place of residence is provided in the following table.



Proportion of direct spend from interstate/overseas match attendees

Source: PwC survey of game attendees

Table 3: Total attendee spending by type of expenditure and location of residency

Total expenditure	Launceston or nearby suburbs	In Tasmania, but not in Launceston or nearby suburbs	Interstate or overseas	Total
Transport (for example: taxis, public transport, car hire)	\$0.6m	\$1.3m	\$1.1m	\$3.1m
Accommodation	n/a	\$1.7m	\$3.7m	\$5.4m
Food and drinks	\$1.3m	\$2.3m	\$2.5m	\$6.1m
Entertainment and activities (excluding admission to the AFL game)	n/a	\$0.9m	\$1.1m	\$2.0m
Shopping	n/a	\$1.4m	\$0.9m	\$2.2m
Other	n/a	\$0.5m	\$0.4m	\$0.9m
Total	\$1.9m	\$8.1m	\$9.7m	\$19.7m

Source: PwC survey of game attendees

Expenditure in Tasmania by HFC and opposition sides also makes a significant contribution to the Tasmanian economy

Information was sought from Hawthorn as to their expenditure throughout the year, and it was assumed that 67 per cent of the Hawthorn Football Club expenditure for each game was also spent by the opposition team for each match.

The following table shows that club expenditure accounted for \$1.1m of expenditure that contributed to the Tasmanian economy.

Table 5: Direct Hawthorn Football Club and visitor club expenditure in Tasmania by type of expenditure

Club	Game related - Accommodation	Game related - Catering	Game related - Transport	Game related - Other	Non-game related spend	Total
Hawthorn	\$71,000	\$342,000	\$20,000	\$56,000	\$496,000	\$985,000
Visiting clubs*	\$47,000	\$27,000	\$8,000	-	-	\$82,000
Total	\$118,000	\$369,000	\$28,000	\$56,000	\$504,000	\$1,066,000

Source: Hawthorn Football Club

* Visiting club spend assumed to be two thirds that of the Hawthorn Football Club related to games. No visiting club spend was assumed for the Tasmanian operations component for the Hawthorn Football Club spend.
Note that totals in the table may not appear to add due to rounding.

Summary of results

Table 6: Summary direct expenditure results

Item	Description	Per person - Launceston or nearby suburbs	Per person - In Tasmania, but not in Launceston or nearby suburbs	Per person - Interstate or overseas	Per person - Average attendee	Total impact
Transport	Expenditure by spectators on transport in Tasmania. For example: taxis, public transport, car hire etc.	\$29	\$50	\$126	\$54	\$3.1m
Accommodation	Expenditure by spectators on accommodation in Tasmania. For example: hotel, AirBnB	n/a	\$65	\$407	\$95	\$5.4m
Food and drinks	Expenditure by spectators on food and drink in Tasmania.	\$60	\$87	\$279	\$107	\$6.1m
Entertainment and activities	Expenditure by spectators on entertainment in Tasmania (excluding admission to the AFL game). For example, movies, live music etc.	n/a	\$35	\$118	\$35	\$2.0m
Shopping	Expenditure by spectators on shopping in Tasmania.	n/a	\$53	\$94	\$39	\$2.2m
Other	Expenditure by spectators in categories other than transport, accommodation, food and drinks, entertainment and shopping in Tasmania.	n/a	\$19	\$49	\$16	\$0.9m
Club expenditure	Expenditure in Tasmania by the Hawthorn Football Club and opposition sides	n/a	n/a	n/a	n/a	\$1.1m
Total	Total direct contribution to Tasmania's economy	\$89	\$309	\$1,074	\$348	\$20.8m

Source: PwC survey of game attendees

Comparison to 2017

Whilst average expenditure per attendee was almost 8 per cent higher than in 2017, total direct spending only increased 2 per cent from 2017 levels.

This is a result of:

- Lower average attendance at AFL games in Launceston - in 2017, the average match attendance to the four AFL games was 12,260 per match. Across 2022, this average fell to 12,060.
- Change in the attendee profile - in 2017, 25 per cent of attendees made the trip to Launceston from interstate or overseas. In 2022, only 16 per cent of attendees travelled to the game from interstate or overseas. These spectators often stay in Launceston for multiple nights and spend more on average than spectators from Tasmania.

2

Total impacts



In addition to the \$20.8 million in direct expenditure, a further \$2.8 million in indirect value was created

Method

In addition to the direct expenditure by people who attended Hawthorn Football Club's five AFL games in Northern Tasmania, there are also a range of flow on impacts for the Tasmanian economy.

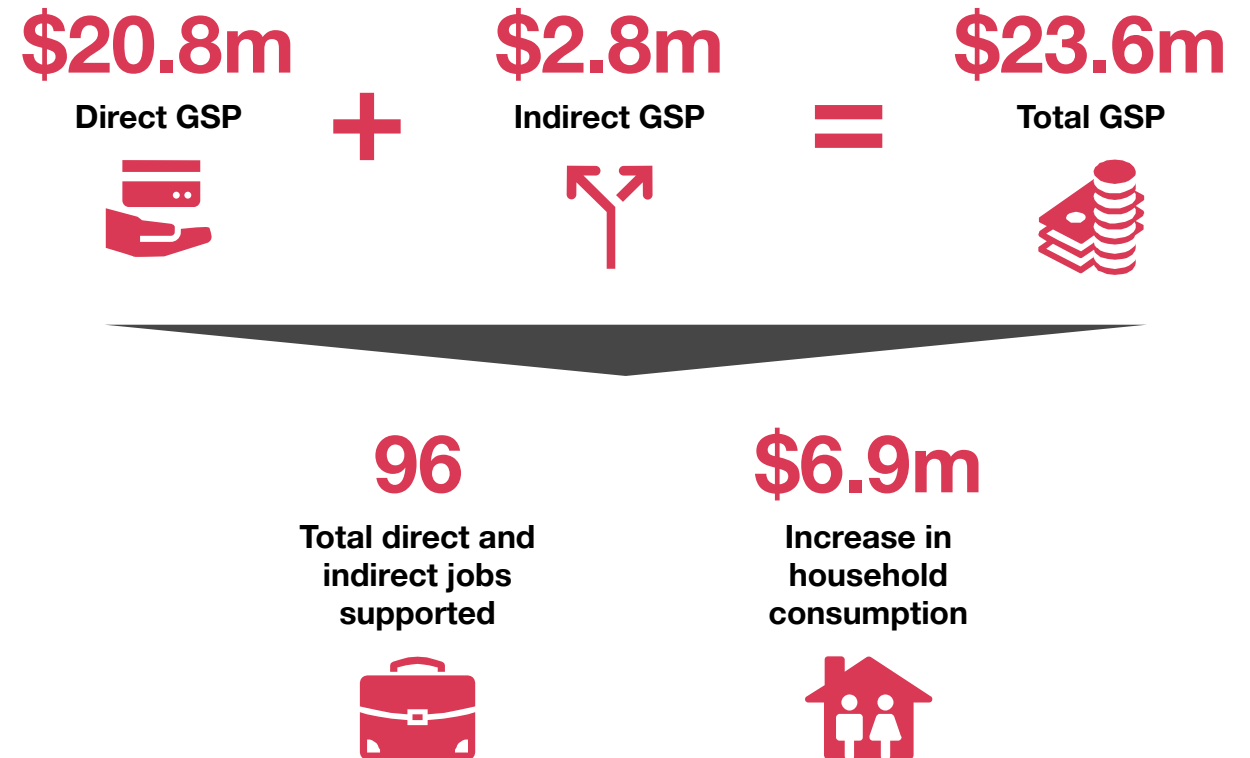
To estimate these indirect economic benefits of hosting HFC games in Northern Tasmania, we have utilised a Computable General Equilibrium (CGE) model. CGE modelling is a widely used economic impact analysis tool for simulating the economy-wide effects of projects or policies, which represent 'shocks' to the economy. CGE models replicate how the economy will adjust to 'shocks' from significant projects and policies.

The appendix describes the methodology of our CGE modelling in further detail.

Results

We estimate that the \$19.8 million direct expenditure from people that attended one of the games (discussed in the previous chapter) together with \$1.0 million direct expenditure by the HFC and opposition teams in Tasmania, generates:

- a total contribution to the Tasmanian gross state product (GSP) (in value add terms) of \$23.6 million or 0.07 per cent of GSP.
- household consumption (a proxy for consumer welfare) and employment are also enhanced by the flow on effects of the additional spending in the economy with household consumption increasing by \$6.9 million and
- employment increasing by 96 persons.

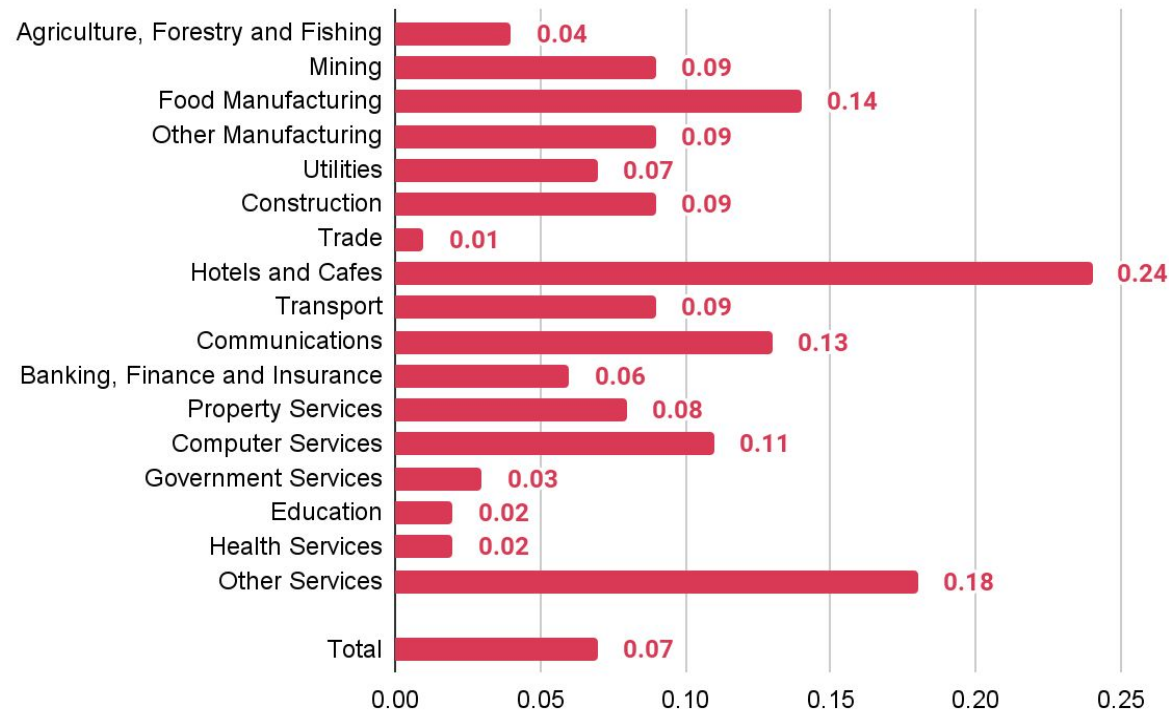


The hospitality industry is most impacted by the AFL matches in Northern Tasmania through the effects on tourism

Gross State Product

Figure 12 below shows the contribution to GSP across industries in Tasmania in percentage change.

Figure 12: Industry Value Added (% change)



Source: PwC modelling

GSP Composition

GSP (in industry value add terms) is made of three main components; compensation of employees (wages), gross operating surplus (profit) and taxes less subsidies on production and imports (net government position). To give an of how the \$23.6 million increase is split across these components, we have combined the modelling results with information from ABS State Accounts (see table below).

Table 7: Impacts on components of GSP (\$m)

Component	Amount
Compensation of Employees	\$11.6m
Gross Operating Surplus	\$10.7m
Taxes less Subsidies on Production and Imports	\$1.2m
Total GSP Increase	\$23.6m

Source: PwC modelling and ABS cat. no. 5220.0, table 7.
Note totals in the table may not appear to add correctly due to rounding in the presentation of the figures shown.

The manufacturing industries contribute most towards the increase in GSP in Tasmania

Gross Value Added

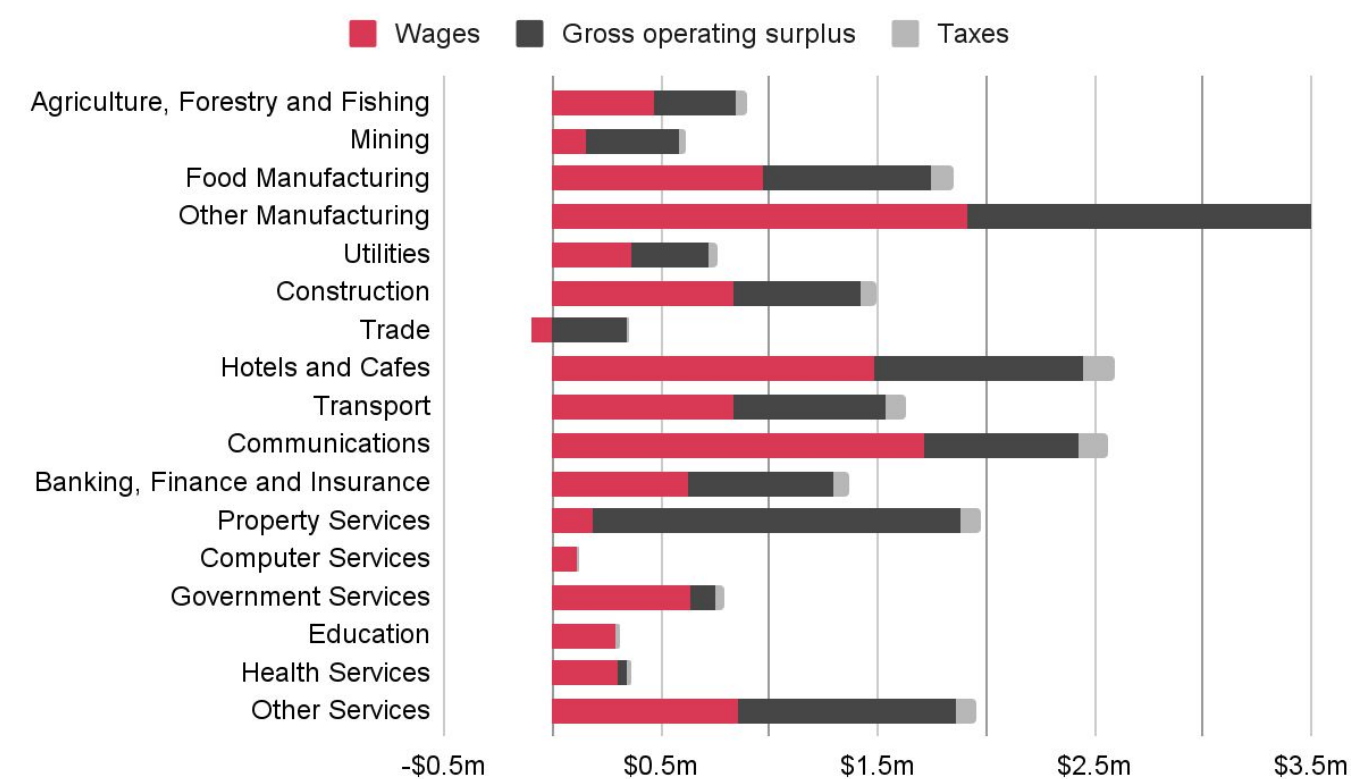
Higher demand for inputs into industry supply chains raises activity in industries that support the directly affected industries, such as the food manufacturing industry.

Some industries may be negatively affected however through price changes. Higher demand for inputs into these industries will raise prices in the source industries of these inputs. Some industries not directly affected by increased visitor expenditure may compete for these inputs. The greater an industries similarity of inputs with the directly affected industries, the greater the negative impact through higher input prices.

In this case, potentially higher prices across some sectors only partially offset the higher to value added through the visitor spending, and not industry is negatively affected. For example, industries such as health services and education receive no direct benefit from visitor expenditure, however they must still compete for input (namely labour) with industries that do directly benefit. So while health services and education are benefitting through higher demand for their products, they must also pay more for their inputs, mitigating the overall impact on these industries.

Figure 13 shows the dollar change in industry value add, split between wages, gross operating surplus and taxes.

Figure 13: Component of GVA impact by industry



Source: PwC modelling

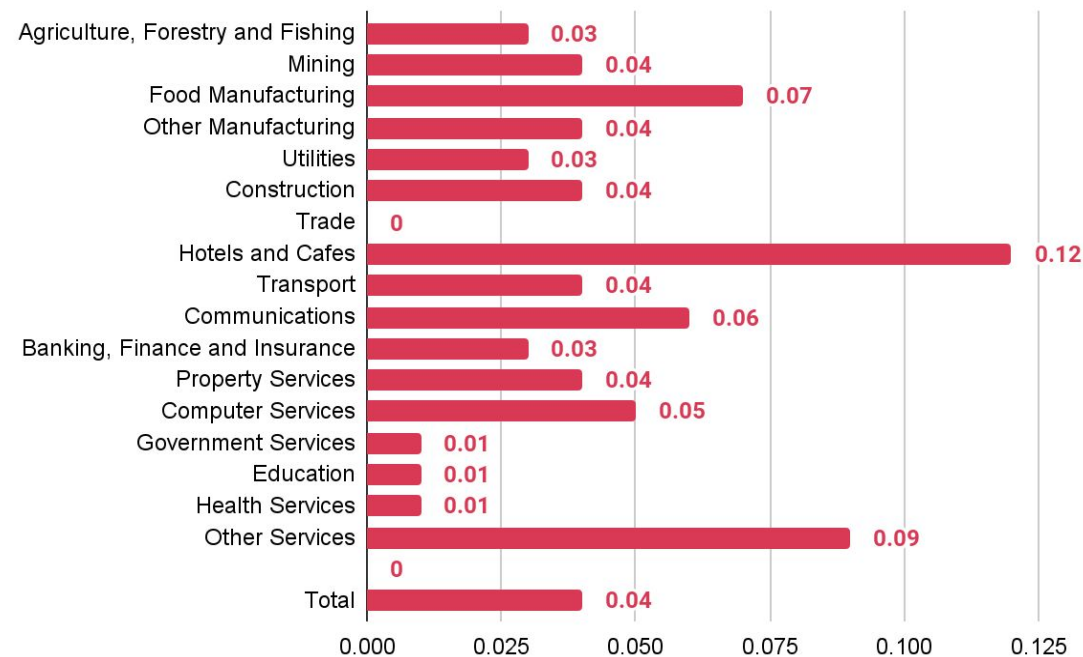
The largest employment impacts occur within the services industries supporting tourism

Impact on employment

The impacts on employment differ slightly from the value add results as it depends on the labour intensity of the industry. For example, the hospitality and other service industries are relatively labour intensive, so changes in output largely flow through to employment as it is a key input into the sector. The impact also depends on which industries compete for the same labour, and which act as key inputs to each other.

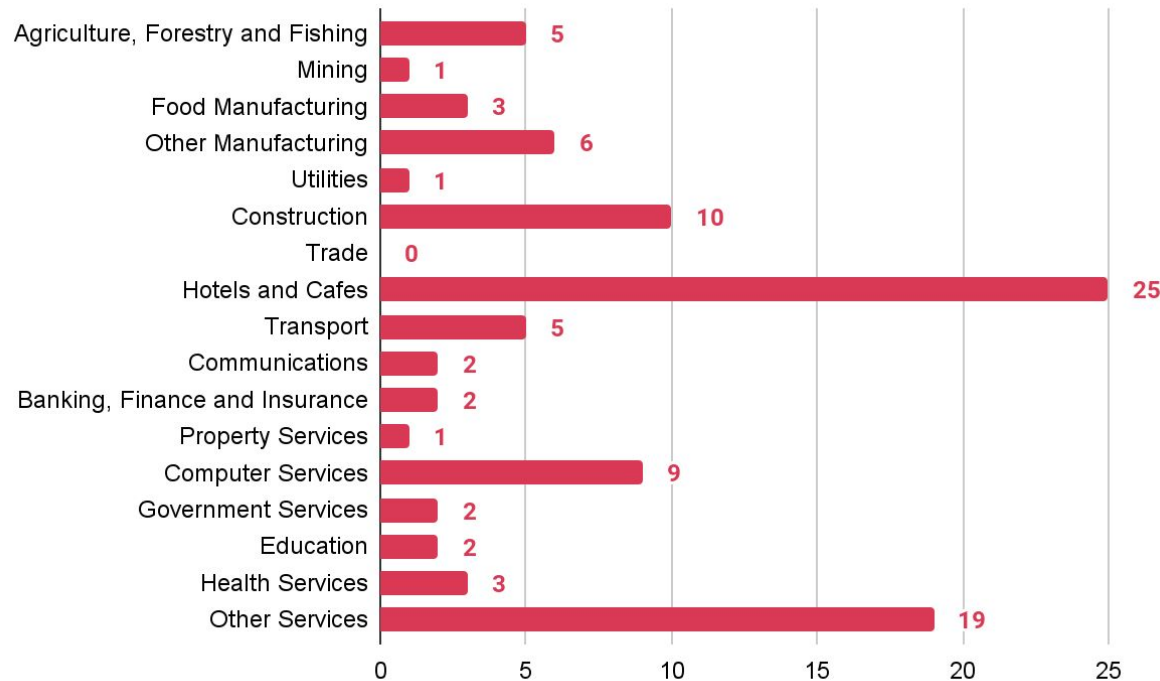
These impacts are shown in the figures below.

Figure 14: Percentage change in employment by industry



Source: PwC modelling

Figure 15: Change in employment by industry



Source: PwC modelling

3

Appendix



Understanding attendance and tourism

To analyse the economic impacts of Hawthorn Football Club's matches in Northern Tasmania in 2022, PwC conducted an online survey of ticket holders. The purpose of the online survey was to develop visitor spending profiles by residential location. The data sets from the online survey and attendance data from the AFL official website were combined to determine total expenditure as a result of the 2022 matches. Further details of the online survey is provided below.

About the online survey

In consultation with the Hawthorn Football Club, an online questionnaire was developed and launched using a secure web-based survey tool. At a high level, information collected in the survey included demographics, place of origin (country, state/territory, region), matches attending, nights away from home, primary reason for travelling, and type of ticket purchased habits (eg Hawthorn Football Club member, General Admission etc). This allowed us to identify, for example, that 9,100 visitors to the Hawthorn Football Club matches in Tasmania were from interstate or overseas, 68 per cent of which identified the football match as their primary purpose of visiting Launceston. The survey collected information from those who purchased or received tickets to one of the four Hawthorn Football Club home and away matches in Launceston.



Flow on and total economic impacts

Flow on and total economic impacts

When considering flow on and total economic impacts, the direct economic impacts as a result of HFC matches in Northern Tasmania were modelled using CGE, a globally accepted and robust approach. This technique overcomes the limitations of simpler input-output models, providing a more accurate estimate of the impacts and is the preferred approach of many Governments and Treasury Departments in Australia.

Comprehensive economic impact analysis generally makes use of sophisticated economic modelling to represent an economy and simulates the effect a change has on the economy. It incorporates detailed representations of industry production, consumption, government, trade, prices and the behaviours that link the economy together.

For example, an additional \$1 spent directly in the Australian economy in the restaurant industry may stimulate a further 50 cents of spending by that sector in the Australian food processing industry, which would then lead to 25 cents of spending in the industrial equipment industry. In this simple example, we would say that the indirect effect was equal to 75 cents for every \$1 spent, for a total expenditure effect of 1.75. From these expenditure impacts, the most commonly used of these measures are, gross state product (GSP), employment and household consumption.

In our CGE analysis, we have estimated the impacts of the HFC matches in Northern Tasmania on key macroeconomic variables. Each of these measures is described below:

- **Gross state product (GSP)** – this represents the “value added” to the economy through spending patterns. Since the GSP figure captures the difference between the value of output and the value of intermediate inputs, it represents the unduplicated total value of economic activity that has taken place. The GSP impacts in this report represent the value added to the economy as a result of the spending made in Tasmania in connection with the HFC matches in Northern Tasmania.
- **Employment** – represents the number of additional full time equivalent jobs created as a result of the spending made in Tasmania in connection with the HFC matches in Northern Tasmania.
- **Household consumption** – measures household economic well-being through the acquisition of goods and services. To the extent that consumption can be considered as a proxy for living standards, an increase in consumption implies the Australian population is better off.

Indirect or flow on impacts and total economic impacts are described below:

- **Indirect impacts or flow on impacts** – The direct spending, will flow through the Australian economy to stimulate other industries. These flow on impacts arise from changes in activity for suppliers through the various industry’s supply chain. For example, these impacts include companies that provide goods or services in connection with consumer spending resulting from the test match. An example of an indirect impact related to consumer spending would include additional demand for a food product supplier.
- **Total impacts** – represent the sum of the gross direct and indirect economic impacts.

CGE modelling

What is a CGE model?

A CGE model is a mathematical model of an economy that is capable of capturing economy-wide impacts and inter-sectoral reallocation of resources that may result from a 'shock' (that is, change in the status quo) to the economy. CGE models are widely used in economic analysis of policies and projects around the world including in Australia by both government and the private sector.

Both input-output (I-O) modelling and CGE modelling have been used previously in the preparation of economic impact assessment for sporting events. However, we prefer to use CGE analysis as it provides a more robust assessment that is used and accepted by government departments, particularly Treasury departments in Australia. Using CGE modelling to measure economy-wide impacts is superior to simply using input-output analysis. For example, I-O models can only scale up or down industries, with no regard for economic interactions and constraints, while CGE models include these features. This means CGE models are able to more realistically capture indirect impacts such as the impact on prices through increased demand for a finite products, or the impact on cost structures of additional demand for finite labour and capital.

The core data of a CGE model is an input-output table. An input-output table is a system of accounts which shows, in value terms, the supply and disposal of goods and services within the economy in a particular year. An input-output table captures sales of products to other industries for further processing (intermediate usage) or to the various categories of final demand. It also captures the inputs used in an industry's production, whether they be intermediate or primary inputs (such as labour and capital). The table is balanced such that total inputs to each industry are equal to total outputs from each industry. Essentially, an input-output table is a snapshot of an economy (whether it is a region, state or country) in a particular year.

A CGE model attempts to 'push forward' the base Input-Output table through time by utilising a set of equations that capture neoclassical microeconomic theory to determine behaviour of economic agents (such as households, governments, industries) when they are faced with changes in key economic variables, especially relative prices. The equations are solved simultaneously, where some variables are determined by the model (endogenous variables) and some are determined outside the model (exogenous variables). The classification of endogenous and exogenous variables is determined by the user based on the set of assumptions derived for the specific modelling exercise. CGE modelling is a widely used economic impact analysis tool for simulating the economy-wide effects of projects or policies, often involving large expenditures and revenues, which represent 'shocks' to the economy. CGE models recognise that complex macroeconomic mechanisms and inter-industry interactions exist in the economy and, in light of this, replicate how the economy will adjust to 'shocks' from significant projects and policies.

Assumptions

- Our analysis of total attendance and visitor numbers are driven by the attendance data on the official AFL website.
- We applied average spend profiles by postcode of origin collected in our PwC online survey to our analysis of total attendance and visitor numbers to provide us with the direct economic impacts resulting from attendance and tourism.
- Match attendee expenditure was combined with club expenditure to provide us with our total direct expenditures. This included items spent by clubs such as travelling spend (including support staff, accommodation and travel allowance). PwC did not verify or audit this data.
- Total direct expenditures represent the gross spending associated with the HFC matches in Northern Tasmania.

The TERM model

The Centre of Policy Studies (CoPS), now located in Victoria University, developed a number of CGE models of the national economy. The suite of models is widely used in Australia by both government and the private sector. The models have been peer reviewed and are regarded by all state and Commonwealth Treasuries as being capable of producing credible results when applied appropriately.

For this study, we used the TERM model (or The Enormous Regional Model). TERM is a regional CGE model that provides a highly disaggregated representation of the Australian economy. It uses a 'bottom up' approach that explicitly represents the economy of each region. However, it has the advantage over other regional models of being specifically created to allow regional CGE analysis without being overly burdensome computationally.

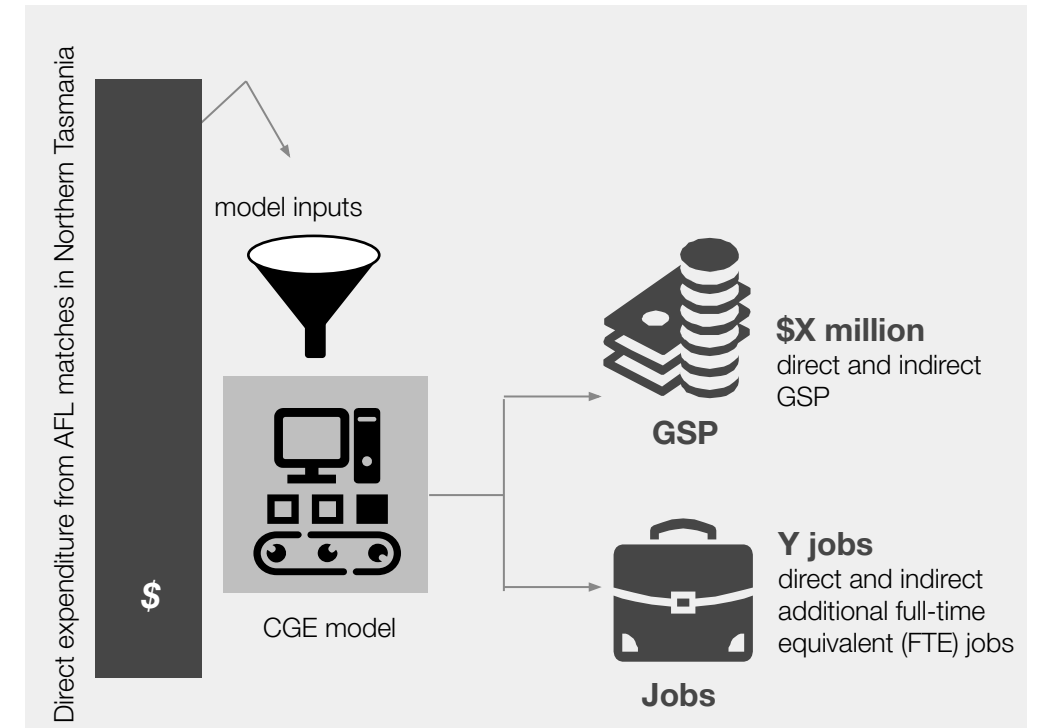
Using TERM, an analyst is able to assess a large number of regions or sectors. TERM's database has 57 regions (statistical division) and 144 sectors, and can be aggregated depending upon the focus of the analysis. Each region can be defined either as an individual statistical division or a summation of statistical divisions. This version of TERM has 80 key industries in Australia's economy.

TERM's extensive disaggregation of the Australian economy allows each region to be independently modelled via the regional input-output tables. The linkages between regions are established through trade and primary factor flows. Each region trades commodities with other regions and with the world market. Importantly, TERM captures the demand for and supply of commodities, as well as their movement from producer to purchaser via various transport modes and wholesale and retail trade.

TERM is capable of modelling a region-specific, demand or supply-side shocks (that is, change in the status quo) and its effect on region-specific prices and quantities.

- TERM's responsiveness to exogenous shocks is dependent upon the three key elements:
- the database (input-output tables for each region)
- choice of behavioural parameters (how demanders of commodities minimise costs)
- choice of closure (combination of exogenous and endogenous variables in the model).

Figure 16: CGE modelling approach



Thankyou

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