



# **Economic Impact Assessment: Highlanders Rugby Club Ltd**

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## Executive Summary

The Highlanders Rugby Club Ltd (HRCL) is based in Dunedin and operates the Highlanders franchise in the Super Rugby competition. HRCL has commissioned this report to help it understand its contribution to the economy of the city and region. This report is based on detail of analysis of HRCL expenditure, staff and player purchases, and visitor expenditure.

The analysis of the Highlanders Rugby Club operations and associated impacts has indicated that the HRCL provides substantial economic impact in the city and region. This analysis has estimated regional economic impacts, but it should be noted that almost all of this occurs within Dunedin City, with only limited impacts from player expenditure, pre-season games which occur in other Otago locations, and minor multiplier effects, extending beyond the city.

Table 1 shows a summary of the impacts from different sources. Visitors to the region are the largest source of impacts, with direct GDP of nearly \$6 million and total GDP of \$10.7 million from attendees at the Highlanders rugby matches in the city. Total Output of \$52.3 million, and total GDP of \$27.4 million is associated with HRCL activities, players and matches hosted in Dunedin. Direct household income of \$14.8 million is associated with the operations of HRCL, of businesses directly supplying HRCL and of spending by players, staff and visitors, while total household income generated is \$19.8 million. Regional employment associated with HRCL and its flow on impacts totals 312 FTEs<sup>1</sup>.

*Table 1: Expenditure and regional flow on impacts from all sources for Highlanders franchise*

| Item                           | HRCL operation | Player and staff expenditure | Visitor expenditure | Total    |
|--------------------------------|----------------|------------------------------|---------------------|----------|
| <b>Direct Output (\$000)</b>   | \$6,480        | \$4,560                      | \$12,020            | \$23,050 |
| <b>Direct GDP (\$000)</b>      | \$9,240        | \$2,750                      | \$5,980             | \$17,960 |
| <b>Direct HHI (\$000)</b>      | \$8,570        | \$1,960                      | \$4,300             | \$14,830 |
| <b>Direct Employment (FTE)</b> | 74             | 36                           | 112                 | 222      |
| <b>Total Output (\$000)</b>    | \$12,630       | \$8,030                      | \$31,630            | \$52,290 |
| <b>Total GDP (\$000)</b>       | \$12,210       | \$4,520                      | \$10,650            | \$27,380 |
| <b>Total HHI (\$000)</b>       | \$10,550       | \$2,800                      | \$6,460             | \$19,810 |
| <b>Total Employment (FTE)</b>  | 112            | 52                           | 148                 | 312      |

All the impacts from visitors and players are additional economic activity to the region, in that the revenue that supports these would otherwise not occur in the city and region. Some of the HRCL operational expenditures that are funded from local sponsorship, merchandise sales, grants and ticketing that may be displaced from other activities in the city and may not be truly additional economic activity. These items are small in relation to the player and visitor related economic impacts.

The Highlanders franchise is associated with substantial economic activity and employment. In addition to its contribution to the city and regional economy, the team plays a larger role in the city structure. This larger role is associated with the benefits that have not been quantified here, including benefits to the stature of the city, marketing advantages, synergies with the education sector, viability of stadium operations, direct investment by players and

<sup>1</sup> Full Time Equivalent jobs

staff in the city, and the benefits to the local population over and above the cost of the tickets to the many local supporters, including those who do not attend the matches.

## 1 Introduction

The Highlanders Rugby Club Ltd (HRCL) is based in Dunedin and operates the Highlanders franchise in the Super Rugby competition. The club was formed in 1995 and played until 2012 at Carisbrook before moving to the Forsyth Barr stadium. While its contribution to the sporting and cultural life of the city is clear, HRCL has commissioned this report to help it understand its contribution to the economy of the city and region.

This report uses four indicators of economic impact:

- Output – the sales or turnover associated directly with Highlanders franchise (Direct Output) and including the flow on impacts for its suppliers and other businesses (Total Output).
- GDP – the value added associated directly with HRCL (Direct GDP) and including the flow on impacts for its suppliers and other businesses (Total GDP).
- Household Income (HHI) – the gross household income for HRCL (Direct HHI) and including the flow on impacts for its suppliers and other businesses (Total HHI).
- Employment – the full time equivalent (FTE) employees working directly for HRCL (Direct Employment) and including the flow on impacts for its suppliers and other businesses (Total Employment).

## 2 Method

This analysis adopts established methodology using Input-Output (IO) analysis. IO analysis describes the relationships between sectors of the economy. It provides information on the outputs, value added/GDP, household income and employment produced by each sector directly, as well as the flow-on effects associated with inputs to that sector from other sectors. This approach allows analysis of the impact that expenditure and consumption derived from a firm's activities has on other firms in the city and region. This analysis uses a set of regional IO tables generated by Butcher Partners Ltd based on the Statistics NZ 2013 IO table. An updated IO table dataset is expected to be produced by Statistics NZ in the next few months, but is not yet available for this report so the older data is relied upon. While it can be understood as a potential source of error, this error is not likely to be significant<sup>2</sup>.

Data on expenditure by HRCL, by staff and players associated with HRCL, and by visitors to Highlanders games was used as the underlying inputs into the IO analysis. The approach is shown in Figure 1 and summarised below.

- HRCL as an entity generates value added and household income, and through purchases from suppliers in Dunedin and Otago generates flow on impacts.
- The staff and players spend money in Dunedin and Otago, which generates direct impact in the businesses with whom they spend their income, and those businesses in turn generate flow on impacts.
- The visitors who come to town to watch the Super Rugby games buy tickets from the HRCL, the income from which is shown in the HRCL impacts. However they also

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<sup>2</sup> Economic multipliers tend to change quite slowly over time.

spend money with businesses in Dunedin, which generates direct impacts in those businesses and then flow on impacts in turn with their suppliers.

The sum of the impacts from these three sources is an estimate of the total impact that the Highlanders franchise has in the city.

The data here includes the players and other staff who are funded through a contract between HRCL and NZ Rugby. Because they (and their salaries and expenditure) are only in Dunedin because of the HRCL franchise, this activity can be considered to be part of the Highlanders impact even if their payments do not appear on the HRCL profit and loss statement.

The data for each part of the analysis are described further in the following sections.

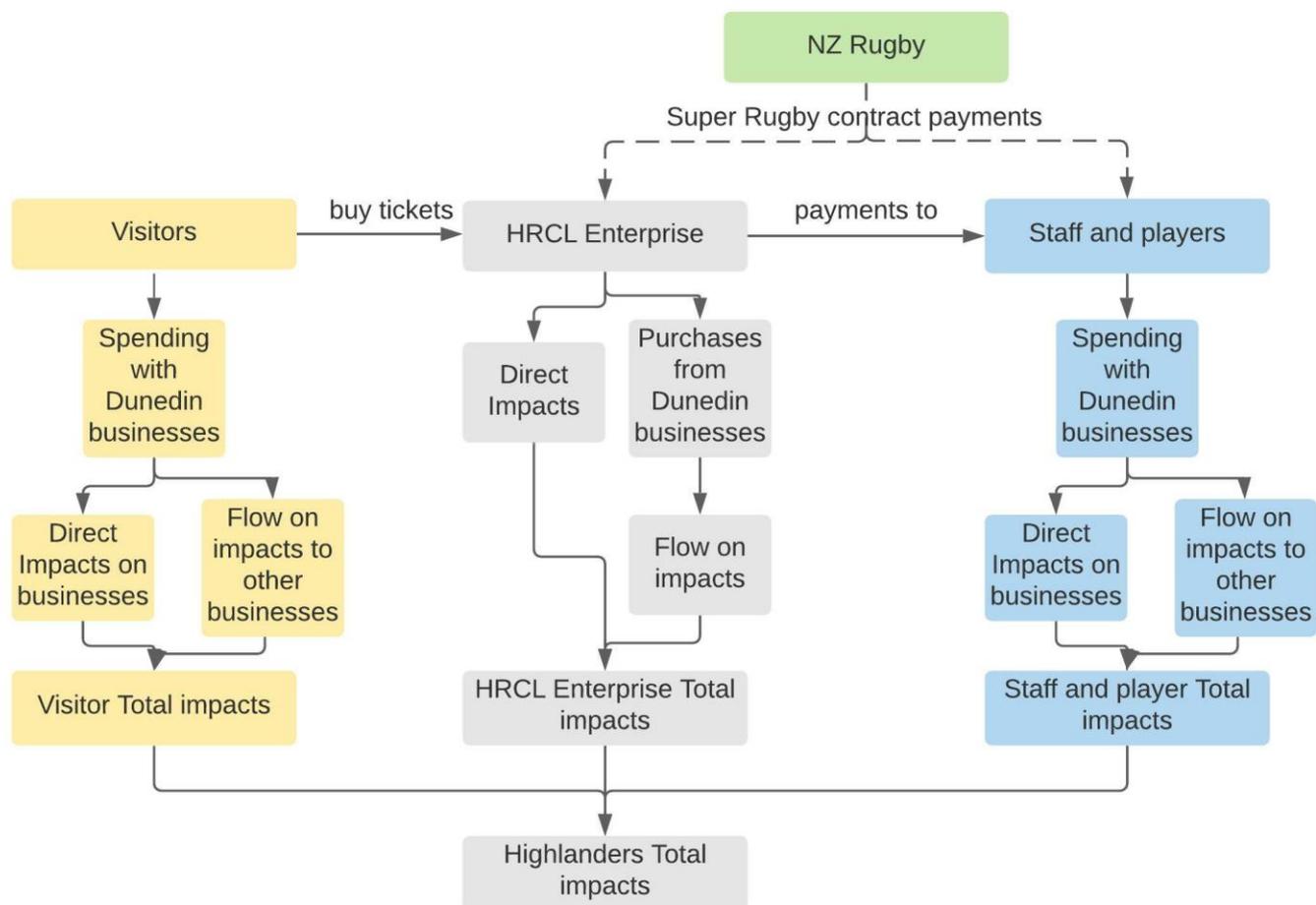


Figure 1: Calculation of the impacts associated with the Highlanders franchise

## 2.1 HRCL accounts and expenditure analysis

Estimates of direct GDP, employment and household income from within HRCL were calculated from the accounts data, staff and player salaries, and other information provided.

HRCL provided a detailed analysis of their annual expenditure over two years (2018/19 and 2019/20) based on available invoice data, with identification of the location of suppliers and type of businesses. The impacts on suppliers to HRCL were estimated from this expenditure analysis. The expenditure data was assigned to industry type using the 106 industry classification in the input output table analysis. The expenditure within the Dunedin and Otago areas was isolated from this data, and used to construct an estimate of within-city and within-region purchases by HRCL. Because the detail covered only part of the expenditure incurred by HRCL, the expenditure by sector was pro-rated up by the ratio between the profit and loss expenditure (excluding salaries and directors fees) and the invoice based expenditure. Multipliers from a 2012/13 input output table were used to estimate the direct and flow on impacts from this expenditure.

## **2.2 Expenditure associated with player and staff salaries**

There are two sources of salary income associated with the Highlanders franchise.

- Administrative and coaching staff paid directly by HRCL
- Players, doctors and coaches who are contracted through NZ Rugby Union (NZRU).

The expenditure by players and staff contributes to the flow on impacts throughout the community. In order to calculate this impact HRCL provided information on the staff directly employed by HRCL, information on the NZRU payments for the franchise and generalised player salary information.

A survey of players was undertaken to determine how much of their salary was spent within the city and region (Appendix A).

For staff savings based on NZ average savings rates from March 2019 – March 2021 (3.8%) and tax were deducted from their salary, with the rest assumed to be spent at the same geographical weighting as the average of the players.

Weightings by industry type from the Consumer Price Index, on the assumption that this accurately reflects household expenditure pattern, were used to partition staff and player expenditure into the 106 industry table. The expenditure information by industry was combined with multipliers from the IO table to estimate the flow on impacts from the salary expenditure.

## **2.3 Visitor expenditure**

Having Highlanders games played in Dunedin increases visitors to the city from visiting spectators. Data from ticket sales was used to estimate the proportion of visitors who were locally and externally based. Data on visitor expenditure from previous analyses of rugby games at the Forsyth Barr stadium (Butcher, 2016), adjusted for increases in the CPI since 2016, was used to estimate the expenditure associated with stadium visitors from outside the city. This information was combined with multipliers used by Butcher (2016) for the aggregated sectors, to estimate flow on impacts from these visitors.

## 3 Results

### 3.1 Club operation

The club operation involves annual expenditure of \$6.3 - \$6.6 million per annum. 65% of this is paid as salaries and to suppliers within Dunedin city, and a small proportion (<2%) is to suppliers in the Otago region but outside the city. The club has 70 staff and players (10 FTEs) and a further 6 staff (4.9 FTEs) on contract. It generates \$9.2 million in direct GDP (including NZRU funded players and staff) and \$8.6 million in direct HHI.

Appendix B shows the breakdown of the effects for suppliers that are associated with the non-salary expenditure. It suggests that there are total (including flow on impacts) of \$2.9 million in GDP, \$1.9 million in household income, and 38 FTEs of employment associated with this expenditure in addition to those impacts generated directly by the club. This gives a total impact of \$12.1 million GDP, \$10.5 million in HHI, and 111 FTEs of employment. Some of the revenue that supports the club operation is sourced from inside the region and city, and this revenue may support alternate activities in the city that similarly provide economic activity. Therefore not all the impacts associated with club operations are additional for the economy of the city and region.

*Table 2: Expenditure and regional flow on impacts from HRCL operations (rows referring to 'Direct' are not additive because the HRCL is the only technical direct outputs. Rows referring to 'Total' are additive)*

| Item                          | HRCL impacts | Supplier impacts (total) | Total        |
|-------------------------------|--------------|--------------------------|--------------|
| Direct Output Dunedin (\$000) | \$6,478,885  | \$3,193,822              | \$6,478,885  |
| Direct GDP (\$000)            | \$9,242,976  | \$1,445,178              | \$9,242,976  |
| Direct HHI (\$000)            | \$8,565,342  | \$1,174,704              | \$8,565,342  |
| Direct Employment (FTE)       | 73.5         | 23.4                     | \$74         |
| Total Output (\$000)          | \$6,478,885  | \$5,997,126              | \$12,476,011 |
| Total GDP (\$000)             | \$9,242,976  | \$2,892,074              | \$12,135,050 |
| Total HHI (\$000)             | \$8,565,342  | \$1,938,095              | \$10,503,437 |
| Total Employment (FTE)        | 73.5         | 37.6                     | 111.1        |

### 3.2 Player and staff spending impacts

Player salaries are estimated at \$9.4 million for the 42 NZRU contracted players, of which \$5 million is for the Super Rugby season. The survey of players indicates that their savings rates are significantly higher than the general population so the typical spending : income ratio is lower than might be expected for other salaried staff. This result is not unexpected given the limited employment life in rugby as a professional athlete. Based on the survey information we estimate that the players spend only 28% of their before tax salaries, not including accommodation payments. 70% of this expenditure occurs within Dunedin.

To calculate staff total household spending, we adjusted salaries down using tax rates and Statistics NZ national savings rate for households between March 2019 – March 2021 (3.8%), with the residual being the estimated expenditure in the region. For staff we assumed the same Dunedin component of expenditure as the players. This is likely to underestimate the Dunedin expenditure rate of other staff, as many of these are permanently

based in Dunedin whereas a proportion of the players are only based in Dunedin for the Super Rugby season.

In order to define the expenditure patterns of players and staff the estimated expenditure was assigned to sectors using the sector weightings from the Consumer Price Index, on the assumption that this accurately reflects household expenditure patterns. The IO table multipliers for each sector were then used to estimate the direct and total GDP, household income and employment that resulted from that expenditure. This breakdown is shown in 0 and summarised in Table 3. It shows \$8 million in total Output impacts, \$4.5 million in total GDP, \$2.8 million in household income, and 52 FTEs are supported by staff and player spending.

*Table 3: Expenditure and regional flow on impacts from player and staff spending*

| Item                                     | Total   |
|--|---------|
| Estimated Expenditure in Dunedin (\$000) | \$4,560 |
| Direct GDP (\$000)                       | \$2,750 |
| Direct HHI (\$000)                       | \$1,960 |
| Direct Employment (FTE)                  | 36      |
| Total GDP (\$000)                        | \$8,030 |
| Total HHI (\$000)                        | \$4,520 |
| Total Employment (FTE)                   | \$2,800 |
| Estimated Expenditure in Dunedin (\$000) | 52      |

The player and coach salaries are all sourced externally to the city and region, and so represents activity that is additional. Some of the revenue from HRCL income that supports the staff is likely to be sourced from inside the region and city, and this revenue may support alternate activities in the city that similarly provide economic activity.

### 3.3 Visitors

The Highlanders Super Rugby team plays 6 – 8 matches per year in the Forsyth Barr stadium. These matches are attended by a combination of local and external visitors. We assume that the local attendees add no additional economic impact because they would otherwise have spent this money on some other local entertainment, which is a conservative assumption because it is possible that they may have travelled to an external location to view the rugby matches. The analysis has not included this aspect of the potential economic impact because of the uncertainty as to how many of the locally-resident spectators would have gone to the match had it been elsewhere, and how much they would have spent while out of the city.

Data on visitors to the city on match day were extracted from the database of ticket sales, where those purchasing provided their addresses. This data showed that 33% of match attendees were visitors to the city, but that their ticket cost was higher than those of local attendees, so that they contributed 55% of ticket sales. We have assumed that additionally 10% of season pass holders and complimentary ticket attendees are from outside the city.

The additional spending by these spectators in Dunedin creates a direct economic impact in the business in which they spend money, and also in other businesses which directly or

indirectly support the initial businesses (so-called multiplier effects). The economic impacts of these visitors were estimated from survey information undertaken by for the 2016 All Black – Wales test at the stadium (Butcher, 2016). The great majority of these people either would not otherwise have come to Dunedin (80%) or would not have stayed as long as they did (6%), while only 14% said it had no impact on the duration of their stay. Those who would not have otherwise come stayed an average of 1.6 nights and spend an average of \$594 per person, or \$364 / night. Those who would have come to Dunedin whether or not the concert was on reported that they stayed on average about 16% longer than they otherwise would have. The additional spending by these spectators in Dunedin creates a direct economic impact in the business in which they spend money, and also in other businesses which directly or indirectly support the initial businesses (so-called multiplier effects).

Taking into account those who would have visited even without the attendance at the match, Butcher (2016) estimated an average additional (marginal) spend of \$500/visitor which was adjusted to \$551 using CPI changes over the period since that report. The sectoral spending by the visitors was also taken from the Butcher (2016) report, and used in conjunction with multipliers from the IO table<sup>3</sup> to estimate the direct and flow on impacts from these visitors.

These data are shown in Table 4. They show an estimated \$12 million in direct visitor expenditure, \$10.7 million in total GDP, \$6.5 million in total household income, and 148 FTEs associated with visitors to Highlander’s home games. This visitor expenditure based economic activity is all additional to the economy of the city and region.

*Table 4: Expenditure and flow on impacts from visitors for Highlanders’ matches*

| Item                                     | Total    |
|--|----------|
| Estimated Expenditure in Dunedin (\$000) | \$12,020 |
| Direct GDP (\$000)                       | \$5,980  |
| Direct HHI (\$000)                       | \$4,300  |
| Direct Employment (FTE)                  | 112      |
| Total GDP (\$000)                        | \$10,650 |
| Total HHI (\$000)                        | \$6,460  |
| Total Employment (FTE)                   | 148      |

### 3.4 Other impacts

The location of the Highlanders Super Rugby team in the Dunedin area has a number of other impacts which are not accounted for here. These include:

- It establishes the city as a major regional centre in New Zealand, given the limited number of Super Rugby teams in the country.
- The broadcasting of matches from the stadium provides national and international exposure for the city, which if purchased would have substantial costs. For example it is noted that sponsors currently pay \$4.1 million in sponsorship to be associated with the Highlanders, which is presumably based on the perceived marketing benefits from being associated with the team.

<sup>3</sup> The multipliers for employment have been adjusted by the PPI changes between 2016 and 2021 to reflect changing employment/output ratios.

- The availability of a local super rugby club adds to the attraction of attending university in the city, with education as a major sectoral activity in the city employing 4,700 workers (Infometrics, 2020) Zoo ticket sales, a favourite of the student sector, accounted for 22% of public attendees (non-complimentary or season/venue pass holders) for 2021.
- The regular events at the stadium contribute to the overall viability of the stadium operations.
- The players and staff of the Highlanders have located and invested in the city. Currently 16 of the players have purchased houses in Dunedin, and a number of them have made additional investments in the city beyond their housing.
- There are significant benefits to Dunedin residents over and above the value implied by the price they pay for tickets. Those benefits accrue to all those residents who enjoy having the team in the city, including those who do not go and watch them in person.

The additional benefits provided by the location of the Highlanders team in the city have not been quantified in this report, but should be noted as potential additional benefits associated with HRCL.

## 4 Summary

The analysis of the Highlanders Rugby Club operations and associated impacts has indicated that the HRCL provides substantial economic impact in the city and region. This analysis has estimated regional economic impacts, but it should be noted that almost all of this occurs within Dunedin City, with only limited impacts from player expenditure and when pre-season games occur in other Otago locations.

Table 5 shows a summary of the impacts from different sources. Visitors are the largest source of impacts, with direct output impacts of \$12 million, direct GDP of nearly \$6 million and total Output of \$31.6 million, total GDP of \$10.7 million from attendees at the Highlanders rugby matches in the city.

The Highlanders franchise generates \$52.3 million in total Output, total GDP of \$27.4 million from expenditure, players, staff and matches hosted in Dunedin. Household income across all sources of \$19.8 million is associated with the Highlanders franchise and its total impact on regional employment is 312 FTEs.

All the impacts from visitors and players are additional, in that the revenue that supports these is entirely external to the city and region. The HRCL operations are funded from sponsorship, merchandise sales, grants and ticketing, and at least some of the ticketing and sponsorships are displaced from other activities in the city. Because the largest items in player salaries and visitor expenditure are sourced from outside the city and region, the majority of the impacts associated with the Highlanders is additional economic activity from Dunedin's perspective.

The economic activity and employment are substantial for an operation that is only moderate in size, and points to the larger role that the team plays in the city structure. These are highlighted by the benefits that have not been quantified here, including benefits to the

stature of the city and marketing advantages associated with national and international attention on Highlanders matches, synergies with the education sector, viability of stadium operations, the direct investment by players and staff in the city, and the pleasure the team gives to residents who support it.

*Table 5: Expenditure and regional flow on impacts from all sources for HRCL*

| <b>Item</b>             | <b>HRCL operation</b> | <b>Player and staff expenditure</b> | <b>Visitor expenditure</b> | <b>Total</b> |
|-------------------------|-----------------------|-------------------------------------|----------------------------|--------------|
| Direct Output (\$000)   | \$6,480               | \$4,560                             | \$12,020                   | \$23,050     |
| Direct GDP (\$000)      | \$9,240               | \$2,750                             | \$5,980                    | \$17,960     |
| Direct HHI (\$000)      | \$8,570               | \$1,960                             | \$4,300                    | \$14,830     |
| Direct Employment (FTE) | 74                    | 36                                  | 112                        | 222          |
| Total Output (\$000)    | \$12,630              | \$8,030                             | \$31,630                   | \$52,290     |
| Total GDP (\$000)       | \$12,210              | \$4,520                             | \$10,650                   | \$27,380     |
| Total HHI (\$000)       | \$10,550              | \$2,800                             | \$6,460                    | \$19,810     |
| Total Employment (FTE)  | 112                   | 52                                  | 148                        | 312          |

## Acknowledgements

The author wishes to thank staff at HRCL who provided information for this project, and players who completed the survey.

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- Butcher, G. (2016). *ECONOMIC IMPACTS OF ALL BLACKS – WALES TEST MATCH*. Christchurch: Butcher Partners contract report prepared for Dunedin Venues Management Ltd.
- Infometrics. (2020). *2020 Annual Economic Profile*. Wellington: Infometrics contract report prepared for Dunedin City Council.



## Appendix A Player survey

# Highlanders player survey

LWP is undertaking some work for the Highlanders quantifying the benefit to the city and region from the Highlanders franchise. The money that the players bring into the area is an important part of this benefit.

This survey asks 6 questions about your income and expenditure as a player for the franchise.

All responses are anonymous and confidential. If you would like to contact me directly about any of the questions in the survey, please give me a call Simon Harris 0274 356 754

1

Please indicate the level of your annual salary, excluding accommodation and relocation payments.

- \$25,000 - \$50,000
- \$50,000 - \$75,000
- \$75,000 - \$100,000
- \$100,000 - \$125,000
- \$125,000 - \$150,000
- \$150,000 - \$200,000
- \$200,000 - \$250,000
- \$250,000 - \$300,000
- \$300,000 - \$400,000
- \$400,000 - \$500,000
- >\$500,000

2

What proportion of your earning are deducted in tax, insurance and deducted savings (Kiwisaver, other savings and investment plans)

- <20%
- 20 - 40%
- 40 - 60%
- 60% plus

3

Of the pay you receive in your bank account (after deductions), what proportion do you spend each month

- <20%

- 20% - 40%
- 40% - 60%
- 60% - 80%
- 80% - 99%
- 100%

4

What proportion of your spending is in Dunedin City?

- <20%
- 20% - 40%
- 40% - 60%
- 60% - 80%
- 80% - 99%
- 100%

5

What proportion of your spending is in the Otago region (Oamaru to the Catlins, and up through to Queenstown and Wanaka)?

- <20%
- 20% - 40%
- 40% - 60%
- 60% - 80%
- 80% - 99%
- 100%

6

Which option best describes your living situation when you are playing for the Highlanders

- Couple only
- Couple with one dependent child
- Couple with two dependent children
- Couple with three or more dependent children
- All other 'couples with child(ren) only' households
- One parent with dependent child(ren) only
- All other 'one parent with child(ren) only' households
- Other one-family households
- One-person household
- Shared accommodation with one other person
- Shared accommodation with two other people
- Shared accommodation with three other people

- Shared accommodation with four or more other people
- All other households(10)

## Appendix B Estimated expenditure in Dunedin and flow on impacts

| Sector   | Sum of Direct GDP  | Sum of Direct HHI  | Sum of Direct Employment | Sum of Total GDP   | Sum of Total HHI   | Sum of Total Employment | Sum of Total output |
|--|--------------------|--------------------|--------------------------|--------------------|--------------------|-------------------------|---------------------|
| Advertising, market research, and management services  | \$82,085           | \$67,857           | 1.3                      | \$155,961          | \$107,257          | 2.0                     | \$302,072           |
| Clothing, knitted products, and footwear manufacturing | \$17,095           | \$15,372           | 0.4                      | \$29,817           | \$21,203           | 0.5                     | \$64,802            |
| Computer system design and related services            | \$84,907           | \$56,605           | 0.7                      | \$124,863          | \$74,918           | 1.0                     | \$199,781           |
| Employment and other administrative services           | \$29,036           | \$26,073           | 0.6                      | \$58,072           | \$41,085           | 0.9                     | \$112,589           |
| Food and beverage services                             | \$10,364           | \$7,773            | 0.2                      | \$19,432           | \$12,091           | 0.3                     | \$40,159            |
| Local government administration services               | \$16,944           | \$12,708           | 0.3                      | \$28,858           | \$18,709           | 0.4                     | \$48,714            |
| Medical and other health care services                 | \$231,519          | \$165,779          | 3.1                      | \$433,027          | \$268,677          | 5.1                     | \$801,742           |
| Motion picture and sound recording activities          | \$19,468           | \$10,225           | 0.3                      | \$44,245           | \$22,811           | 0.6                     | \$111,497           |
| Motor vehicle and motor vehicle parts retailing        | \$18,190           | \$14,779           | 0.2                      | \$29,274           | \$19,705           | 0.3                     | \$49,737            |
| Printing   | \$57,177           | \$37,271           | 0.7                      | \$101,648          | \$59,295           | 1.1                     | \$213,460           |
| Specialised food retailing                             | \$13,655           | \$17,398           | 0.5                      | \$30,042           | \$25,086           | 0.7                     | \$62,208            |
| Sport and recreation services                          | \$902,191          | \$773,306          | 15.5                     | \$1,911,785        | \$1,317,485        | 25.6                    | \$4,145,781         |
| <b>Grand Total</b>                                     | <b>\$1,482,630</b> | <b>\$1,205,146</b> | <b>24.0</b>              | <b>\$2,967,023</b> | <b>\$1,988,321</b> | <b>38.6</b>             | <b>\$6,152,542</b>  |

Table 6: Economic impacts associated with player and staff salaries

| Sector  | Total staff and player expenditure | Direct GDP  | Direct HHI  | Direct Employment | Total Output | Total GDP   | Total HHI   | Total Employment |
|---|------------------------------------|-------------|-------------|-------------------|--------------|-------------|-------------|------------------|
| Accommodation   | \$13,150                           | \$6,706     | \$4,208     | \$0.10            | \$23,143     | \$11,572    | \$6,487     | 0.14             |
| Banking and financing; financial asset investing                      | \$166,734                          | \$113,379   | \$46,686    | \$0.58            | \$263,440    | \$165,067   | \$71,140    | 1.01             |
| Broadcasting and internet publishing                                  | \$8,574                            | \$4,030     | \$2,972     | \$0.03            | \$14,747     | \$7,374     | \$4,573     | 0.06             |
| Building cleaning, pest control, and other support services           | \$9,242                            | \$5,361     | \$3,820     | \$0.10            | \$16,359     | \$9,057     | \$5,669     | 0.14             |
| Electricity generation and on-selling                                 | \$33,058                           | \$8,926     | \$1,322     | \$0.01            | \$63,472     | \$19,504    | \$4,408     | 0.05             |
| Food and beverage services  | \$66,124                           | \$31,740    | \$23,805    | \$0.72            | \$122,991    | \$59,512    | \$37,029    | 0.96             |
| Fuel retailing  | \$64,973                           | \$40,933    | \$35,519    | \$1.03            | \$116,952    | \$66,922    | \$47,647    | 1.26             |
| Furniture, electrical, and hardware retailing                         | \$92,898                           | \$55,739    | \$42,114    | \$0.94            | \$171,861    | \$97,543    | \$60,693    | 1.29             |
| Gas supply  | \$38,203                           | \$7,259     | \$509       | \$0.01            | \$45,844     | \$10,697    | \$1,528     | 0.03             |
| Health and general insurance  | \$71,938                           | \$41,004    | \$15,347    | \$0.18            | \$112,223    | \$63,305    | \$27,816    | 0.36             |
| Hospitals   | \$0                                | \$0         | \$0         | \$0.00            | \$0          | \$0         | \$0         | 0.00             |
| Local government administration services                              | \$81,176                           | \$51,953    | \$38,964    | \$0.89            | \$149,364    | \$88,482    | \$57,364    | 1.23             |
| Medical and other health care services                                | \$85,756                           | \$46,308    | \$33,159    | \$0.61            | \$160,363    | \$86,613    | \$53,740    | 1.01             |
| Motor vehicle and motor vehicle parts retailing                       | \$2,405,660                        | \$1,539,622 | \$1,250,943 | \$20.52           | \$4,209,904  | \$2,477,829 | \$1,667,924 | 28.69            |
| Other store based retailing; non-store and commission based retailing | \$167,406                          | \$92,073    | \$62,498    | \$1.46            | \$301,331    | \$162,384   | \$93,748    | 2.06             |
| Other transport   | \$40,208                           | \$14,877    | \$8,578     | \$0.15            | \$69,963     | \$31,363    | \$16,619    | 0.28             |
| Owner-occupied property operation                                     | \$28,016                           | \$20,451    | \$0         | \$0.00            | \$36,420     | \$24,934    | \$2,241     | 0.04             |
| Postal and courier services   | \$1,048                            | \$461       | \$349       | \$0.01            | \$2,117      | \$1,006     | \$657       | 0.01             |
| Publishing (except internet and music publishing)                     | \$6,288                            | \$2,955     | \$1,928     | \$0.03            | \$11,319     | \$5,534     | \$3,354     | 0.06             |
| Recreational, clothing, footwear, and personal accessory retailing    | \$89,849                           | \$48,518    | \$34,742    | \$0.99            | \$168,017    | \$89,849    | \$53,909    | 1.34             |
| Residential building construction                                     | \$184,341                          | \$38,712    | \$34,410    | \$0.57            | \$435,044    | \$147,473   | \$103,231   | 1.73             |
| Residential property operation  | \$146,683                          | \$108,546   | \$3,912     | \$0.07            | \$211,224    | \$136,415   | \$21,514    | 0.36             |
| Road transport  | \$38,298                           | \$15,319    | \$11,745    | \$0.18            | \$69,320     | \$30,639    | \$19,404    | 0.31             |
| Sport and recreation services   | \$109,093                          | \$45,819    | \$39,273    | \$0.79            | \$210,549    | \$97,093    | \$66,910    | 1.30             |
| Supermarket and grocery stores  | \$490,845                          | \$338,683   | \$222,516   | \$5.75            | \$849,162    | \$525,204   | \$307,596   | 7.30             |
| Telecommunications services   | \$58,305                           | \$27,987    | \$11,661    | \$0.12            | \$84,543     | \$41,980    | \$18,658    | 0.24             |
| Tertiary education  | \$29,819                           | \$21,470    | \$15,506    | \$0.18            | \$50,991     | \$32,205    | \$21,072    | 0.28             |

| <b>Sector</b>                               | <b>Total staff and player expenditure</b> | <b>Direct GDP</b>  | <b>Direct HHI</b>  | <b>Direct Employment</b> | <b>Total Output</b> | <b>Total GDP</b>   | <b>Total HHI</b>   | <b>Total Employment</b> |
|---|---|--------------------|--------------------|--------------------------|---------------------|--------------------|--------------------|-------------------------|
| Travel agency and tour arrangement services | \$30,582                                  | \$16,514           | \$12,641           | \$0.21                   | \$58,107            | \$31,194           | \$20,796           | 0.35                    |
| <b>Grand Total</b>                          | <b>\$4,558,268</b>                        | <b>\$2,745,345</b> | <b>\$1,959,127</b> | <b>36.23297</b>          | <b>\$8,028,769</b>  | <b>\$4,520,748</b> | <b>\$2,795,728</b> | <b>51.88</b>            |

Economic impacts associated with visitor expenditure for Highland home games

| Sector             | Direct Spend    | GST            | Ex GST & adjust to gross margin for retail | Direct GDP     | Direct HHI     | Direct Employment | Total Output    | Total GDP       | Total HHI      | Total Employment |
|--------------------|-----------------|----------------|--|----------------|----------------|-------------------|-----------------|-----------------|----------------|------------------|
| Accommodation      | \$4,240         | \$1,140        | \$3,690                                    | \$1,880        | \$1,180        | 28.1              | \$7,450         | \$3,210         | \$1,810        | 38.5             |
| Food & Beverage    | \$6,200         | \$2,420        | \$5,400                                    | \$2,590        | \$1,950        | 60.4              | \$11,530        | \$4,650         | \$2,970        | 75.7             |
| Retail Shopping    | \$3,860         | \$930          | \$1,170                                    | \$680          | \$510          | 11.4              | \$7,220         | \$1,190         | \$610          | 15.2             |
| Travel During Stay | \$630           | \$30           | \$540                                      | \$220          | \$170          | 2.4               | \$1,130         | \$440           | \$280          | 4.2              |
| Entertainment      | \$630           | \$30           | \$540                                      | \$290          | \$240          | 4.3               | \$1,180         | \$560           | \$390          | 6.7              |
| Tourist Activities | \$270           | \$10           | \$230                                      | \$100          | \$80           | 1.4               | \$520           | \$200           | \$140          | 2.3              |
| Petrol             | \$1,110         | \$80           | \$150                                      | \$90           | \$80           | 2.1               | \$1,990         | \$150           | \$110          | 2.5              |
| Other              | \$330           | \$10           | \$290                                      | \$120          | \$90           | 1.9               | \$610           | \$230           | \$140          | 2.8              |
| <b>Total</b>       | <b>\$17,250</b> | <b>\$4,630</b> | <b>\$12,020</b>                            | <b>\$5,980</b> | <b>\$4,300</b> | <b>112.0</b>      | <b>\$31,630</b> | <b>\$10,650</b> | <b>\$6,460</b> | <b>147.8</b>     |