

# Analysis of Some Assumptions and Their Impact on the Estimate of Direct Expenditure in the HRF Centre Report for NCC on the 2017 Newcastle 500 Supercars Event

Janet Aisbett

**The direct benefit of the Newcastle 500 Supercars event appears to be less than half the estimate given in the Executive Summary of the HRF Centre Report. The Report ignores tourism statistics specific to the Newcastle LGA; it misuses valuable data on average expenditure in the Newcastle LGA; it inappropriately selects a cold-snap May weekend as counterfactual; it does not account for Supercars visitors finding accommodation in neighbouring LGAs; and it neglects the impact of the event on international tourists. Finally, the Report's use of Telstra data in which visitor counts apply to the Newcastle-Cooks Hill statistical area rather than to the entire Newcastle LGA handicaps its analysis of the benefit of the event to the Newcastle LGA.**

## 1. INTRODUCTION

Analysis of the benefit figures in the *HRF Centre Report into the Newcastle 500 Supercars Event* (the Report) is complicated by the sketchy description of methods and incomplete data. Visitor statistics specific to the Newcastle LGA are readily available<sup>i</sup> and their use would have allowed a simpler approach to that taken in the Report.

Our analysis first raises issues with the Report's assumptions and approach, focussing on expenditure and then on visitor counts. These issues prompt revisions to the direct expenditure in the Newcastle LGA during the Supercars period as well as during the "counterfactual" 3-day period. The revisions lead to a markedly reduced estimate of the direct benefit of the event.

Much of the estimated Supercars benefit derives from the large increase in accommodation prices over the event weekend. The Report employs an inflation factor of 2.15, based on a survey of 16 larger accommodation providers in the Newcastle LGA. In the absence of any other research, we accept this figure<sup>ii</sup>. However, we wonder at the absence of data on actual tariffs during "normal" periods and during the event, which the survey would have been expected to collect in order to compute and/or verify the inflation factor. Such data would have helped test the Report's estimate of accommodation costs which are derived using a circuitous path.

Tourism research divides visitors into international and domestic categories, with the latter subdivided into "day trippers" and overnight visitors<sup>iii</sup>. Overnight visitors further subdivide into those who stay with commercial accommodation providers and those who don't pay because they stay with friends or family. The Report refers to the

contribution of 312 international visitors known to Supercars, and thenceforth ignores international tourism. Statistics from the Hunter Region are used to estimate the proportion who pay for accommodation. The researchers had Telstra data on visitors which included their home region, so the Report determined day trippers to be those from Port Stephens, Maitland, Lake Macquarie or the Lower Hunter<sup>iv</sup>. All others were assumed to stay the night<sup>v</sup>. This classification appears to overstate the proportion of day trippers (see 3.3) but it is not clear how to remedy the problem, so we use the Report's classifications in our revised computations (Section 4).

## 2. EXPENDITURE

The Report estimates direct expenditure of visitors in the Newcastle LGA to be \$12.638m over the three days of the event. Visitor expenditure for "what would have happened" in the absence of the event is claimed to be \$3.694m, giving the event a direct benefit of nearly nine million dollars.

To put this in context, the average 3-day expenditure by visitors in the Newcastle LGA is \$7.126m<sup>vi</sup>. Of this, \$1.175m (16%) comes from international visitors.

### 2.1 Expenditure of an Average Day Tripper

The Report assumes that a day tripper spends \$80 on average, whether in the event period or in the "counterfactual" May weekend. This figure is derived from Geograffia Spendmapp data gathered over the entire Newcastle LGA on the event weekend, and only includes purchases with businesses in the LGA. No data were collected in the base May weekend, although data from weekends on either side of the event suggest the event spend may have been slightly lower than average.

The usual average expenditure of a visitor to the Newcastle LGA, excluding accommodation, which is \$83<sup>vii</sup>. However, the usual daily spend of a day tripper is \$116<sup>viii</sup>. This includes travel-related expenditure, which the Spendmapp data apparently excludes.

### 2.2 Expenditure of an Average Overnight Visitor

To estimate the overnighters' average expenditure outside the event period, the Report uses the daily expenditure of a domestic overnight visitor to the Hunter Region, which is \$191. The Report makes no justification for using this figure rather than available statistics specific to the Newcastle LGA. Nor does it discuss why the Spendmapp data, which included overnighters, is ignored. The figure is well above the \$122 average overnight expenditure in the Newcastle LGA (and also above the \$156 which domestic overnight visitors spend).

### 2.3 Average Cost of Paid Accommodation

To compute the average price paid for accommodation, the Report appears to use the following steps<sup>ix</sup>:

First, compute the accommodation portion of expenditure amongst those who pay. For this, the Report refers to a survey of 832 attendees of the 2012 Bathurst Supercars, which gave

the accommodation proportion for visitors staying in hotels and the like, and the proportion for those staying in hired houses. These two proportions are averaged, without taking into account the relative use of that accommodation type. The resulting proportion, 0.58, is applied to the average daily expenditure of a Hunter Region overnight domestic visitor (\$191). This gives an average accommodation nightly cost of \$111 <sup>x</sup>.

The result is taken to be the “usual” cost of accommodation, despite the proportion being derived from data relating to a Supercars event. With the event inflation factor, the Report estimates accommodation costs to be \$238 per person per night during the event.

Rather than take this complex path with its implicit assumptions, accommodation costs can be obtained directly from Newcastle LGA data. The average cost of accommodation is \$100 per night, or \$136 if only domestic visitors are included. During the event, these costs inflate to \$215 and \$292 respectively <sup>xi</sup>.

#### 2.4 Average Overnighter’s Expenditure as Accommodation + Other

In computing average overnight expenditure, allowance must be made for the proportion of nights spent with family and friends. To estimate this, the Report uses the percentage of visitors to the Hunter Region who state their main purpose is to visit family/friends, namely 39%. In contrast, data specific to the Newcastle LGA provide the percentage of nights actually spent with friends or relatives, which is 45% (or 54% if only domestic visitors are considered).

Using the Report’s figures, the usual average spent per night on accommodation over all overnight visitors is \$68, which means the average overnight visitor spends \$191-\$68 = \$123 after paying for accommodation. Yet the Spendmapp average over all visitors was \$80. It is impossible for day trippers to spend an average \$80 as well, which the Report assumes. There is logical inconsistency in the Report’s calculations.

### 3. VISITOR NUMBERS

In order to compute total direct expenditure, the spend of each category of visitor must be multiplied by the number of visitors in that category. The Report claimed 82,700 visitors during the event and 30,600 during the 3 days in May used to represent “what would have been”. To put this in context, over an average 3 days the Newcastle LGA has 60,960 visitors, of whom 43,930 are domestic. Therefore: (i) the event attracted a sizable uplift of visitors over the Newcastle LGA average; and (ii) the counterfactual visitor count is abnormally low, being 70% of the average count of LGA visitors.

#### 3.1 International Visitors

The Report does not consider international visitors, on the basis that only 312 were identified as Supercars attendees. By not taking them into account, the Report is implicitly assuming that the average daily international visitor count (5,280) and daily spend (\$391,000) is unaffected by an event which almost none apparently attended. The assumed increase in accommodation costs, however, suggests some negative impact should be factored in.

### 3.2 The Counterfactual Visitor Count

The May weekend used to represent a normal weekend toward the end of November experienced a quite severe cold snap, beginning on the Friday<sup>xii</sup>. Since “going to the beach” is one of the main visitor attractions in the Newcastle LGA <sup>xiii</sup>, the weather would reduce visitor numbers.

Assessing these May figures is complicated by the fact the Report’s count is based only on visitors who enter the event space. This plausibly captures most visitors to the Newcastle LGA when a big event like Supercars is on, drawing interested visitors to the event space and simultaneously putting pressure on accommodation which deters other visitors from coming to Newcastle. However, on an average weekend, a sizeable proportion of visitors may not enter the event space on any given day<sup>xiv</sup>. Because the aim is to find the net effect of Supercars on tourist expenditure over the entire Newcastle LGA, we need to consider all visitors.

One remedy would be to base the counterfactual data on average Newcastle LGA visitor statistics and throw away the May figures, which are not accompanied by any accommodation or SpendMapp expenditure data. However, that would create a dissonance with the treatment of the event weekend counts. We therefore suggest scaling the May Telstra visitor count to the usual average domestic visitor count.

### 3.3 The Ratio of Day Trippers to Overnights

The ratio of day trippers to domestic overnights in the Newcastle LGA is on average 0.95<sup>xv</sup>. The Report visitor counts give a ratio of day trippers to overnights of 1.73 for the counterfactual weekend and 1.60 for the event period. This suggests two possibilities: (i) the Report’s approach to determining whether visitors are day trippers differs from standard definitions; and/or (ii) on any day, overnight visitors to the Newcastle LGA are less likely to go to the event space than are day trippers.

Visitors from adjacent areas, which the Report automatically classifies as day trippers, may come to attend evening events after which they prefer not to drive home; or they may have friends and family in the Newcastle LGA with whom they sometimes stay even though home is not far away. Such stays would be treated as an overnight in the Tourism Research Australia figures, increasing the proportion of overnights relative to the Report’s findings.

With regard to point (ii), since overnight domestic visitors to Newcastle stay an average 2 nights, and the majority of accommodation is outside the event space, it is plausible that a proportion do not normally come to the event space each day of their visit (for example, they might visit the Hunter as a day excursion).

At this stage, there is no solid evidence to resolve the discrepancy between the Report’s determination of categories of visitor using the Telstra data and the Newcastle LGA tourism statistics.

### 3.4 Overnight Visitors or Day Trippers?

The Report assumes every domestic visitor who paid for accommodation stayed in the Newcastle LGA; that is, none stayed in Lake Macquarie or other neighbouring LGAs. This is clearly wrong during the event period. If accommodation tariffs in the Newcastle LGA double during the event (as the Report assumes), budget-conscious visitors will look at other options. Indeed, even a major Supercar sponsor offers accommodation packages which are primarily in Lake Macquarie<sup>xvi</sup>.

If visitors do not stay in the Newcastle LGA, they are day trippers.

The Report also assumes that every visitor who was in the event space on Sunday and lived outside the immediate area stayed that night. This was not true of the event weekend, as extra trains to the Hunter and on the Newcastle Line to Sydney were scheduled for Friday, Saturday and Sunday afternoon and nights, but not for the Monday. Additional Virgin flights were scheduled from Newcastle Airport for the Sunday as well as the Monday. Motorists on the F1 were warned of traffic congestion on the Sunday.

It is also unlikely that every Sunday visitor on a normal weekend stays the night.

The end-of-weekend effect could impact significantly on the estimate of benefit of the Supercars event and requires further research.

## 4. IMPACT

The impact of the issues discussed above is profound. Factoring in the major effects reduces the direct benefit to under six million dollars: this means that the event benefit calculated using Scenario 2 of the Report is overstated by more than 50%.

### 4.1 Taking Visitor Expenditure from SpendMapp data and Newcastle LGA Tourist Statistics (2.1-2.4)

According to the Report, visitors to Newcastle spent about \$80 per day with local businesses (excluding any accommodation) during the Supercars event, and a similar amount on two other weekends. The average cost of accommodation in Newcastle is \$136 and the percentage of overnight domestic visitors who stay with friends/family is 54.5%, according to tourism statistics for the Newcastle LGA.

Accepting these figures, and retaining all other assumptions of the Report, the direct benefit of the event is \$7.706m<sup>xvii</sup>. The Report's logically inconsistent assumptions about visitor expenditure lead to a 16% overstatement of direct benefit.

### 4.2 Using an average rather than a cold-snap weekend as counterfactual (3.2)

If the number of domestic visitors on the cold-snap weekend used as counterfactual is scaled to the average for the Newcastle LGA then the expenditure of an additional 13,300 visitors must be subtracted from the direct benefit. This further reduces the benefit to \$6.355m. The Report's use of an atypical weekend as counterfactual, together

with its problematic assumptions about visitor spending, lead to a 41% overstatement of the benefit.

#### 4.3 Recognising that some Supercars fans stay in neighbouring LGAs (3.4)

If 15% of overnight visitors during the event stay in neighbouring LGAs rather than in the Newcastle LGA, then direct expenditure during the event (and hence direct benefit) is reduced by their accommodation costs. This brings the direct benefit down to 6.035m, and its overstatement in the Report to 48%.

#### 4.4 Recognising the impact on international tourists to the Newcastle LGA (3.1)

If during the event international visitors (whose expenditure is ignored in the Report) are crowded out by domestic visitors (whose expenditure is counted in the Report), then the direct expenditure is reduced by the lost international income. This reduces the direct benefit by another \$293,000, bringing it to \$5.742m and the Report overstatement to 56%

## NOTES

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<sup>i</sup> Unless cited otherwise, all Newcastle LGA visitor statistics quoted in this document come from *Local Government Area Profiles: Newcastle (C)*: Tourism Research Australia, 2017.

<sup>ii</sup> The survey was based on a self-selected sample of establishments offering 10 or more rooms. This is likely to be representative of such establishments, given that ABS data show there are only 28 establishments offering 15 or more rooms. The survey ignores smaller hotels, camp sites, hostels and B&Bs.

<sup>iii</sup> Tourism Research Australia defines an overnight visit as staying away from home at least one night at a place at least 40 kilometres from home. Day visitors are those who travel a round trip of at least 50 kilometres, are away at least 4 hours but not for a night, and are not on routine travel such as commuting. Thus, the Report's use of the Telstra data might classify overnight or day-tripper "visitors" who would not be so defined by these criteria.

<sup>iv</sup> Throughout, all figures from the Report refer to Scenario 2 which is used in the Report's Executive Summary.

<sup>v</sup> The Telstra data which is the basis for the Report's visitor counts detects the home region of domestic visitors. International visitors with a local phone will presumably be counted as domestic.

<sup>vi</sup> Business visitors make up about 16% of all visitors, but double that number come primarily to visit family or friends. Therefore, there is no reason to believe that weekdays would attract more visitors than weekends.

<sup>vii</sup> The profiles produced by Tourism Research Australia give the average expenditure of overnighers who pay for accommodation as well as the average over all overnight visitors, and does so both for domestic and international visitors. This allows the average expenditure on accommodation to be derived.

<sup>viii</sup> A domestic overnigher spends \$94 each day, not counting accommodation. The international visitor is more frugal, spending \$24 daily over an average 20 day stay.

<sup>ix</sup> Clarification of the Report's approach was unsuccessfully sought from the lead author.

<sup>x</sup> The \$191 is averaged over some visitors who pay nothing as they stay with family and friends. It can be shown that applying the proportion 0.58 at this stage underestimates accommodation costs by 22% (assuming the \$191 average overnight spend is correct).

<sup>xi</sup> The total expenditure on event accommodation in the Newcastle LGA is obtained by multiplying:

- the number of visitor nights spent in the Newcastle LGA;
- the proportion of these who pay for accommodation;
- the normal average cost of accommodation; and
- the "inflation" factor on accommodation costs due to the event.

<sup>xii</sup> From The Herald, 19<sup>th</sup> May 2017:

*"The Hunter's balmy Autumn weather is set to change with the Bureau of Meteorology forecasting a dive in temperatures and a 90 per cent chance of rain by Friday afternoon. A*

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*minimum of seven degrees and a maximum of 13 degrees are forecast for Friday. Saturday has a higher chance of rain with the chance of a thunderstorm in the Upper Hunter and overnight temperatures falling to around 10 degrees. The region's rain is tipped to ease on Sunday but temperatures will still remain in the lower range."* Hazardous surf conditions were expected.

<sup>xiii</sup> *Newcastle Visitor Profile and Satisfaction Report. Tourist Research Australia 2013 and Newcastle City Council Destination Management Plan 2016-2019.*

<sup>xiv</sup> More than a third of visitors to the Newcastle LGA come here to visit family and friends and ABS data show that the event space (which is the Newcastle Cooks Hill statistical area) contains only about 30% of Newcastle LGA's larger hotels, motels and apartments and about 10% of the population.

<sup>xv</sup> No internationals are deemed to be day trippers.

<sup>xvi</sup> The accommodation options in packages offered by Virgin Australia, a major event sponsor of Supercars, are mostly outside Newcastle LGA. Supercar patrons also traditionally camp - there are now 7100 campsites at Mt Panorama. Newcastle LGA offers few campsites compared with neighbouring LGAs such as Lake Macquarie.

<sup>xvii</sup> The expenditure during the event period is \$10.847m and during the "counterfactual" May weekend is \$3.141m.