



TRANSPORT AFFORDABILITY INDEX: REGIONAL CENTRES EXPANSION



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EXECUTIVE SUMMARY

Purpose of the regional extension to the Index

In 2016, SGS Economics and Planning (SGS) worked with the Australian Automobile Association (AAA) to develop the Transport Affordability Index. The Index was designed to act as an indicator of movements in the price of transport costs in each of Australia's capital cities. The Index has been updated by AAA on a quarterly basis using a range of publicly available data sources.

At the beginning of 2017, the AAA commissioned SGS to extend the Transport Affordability Index to include regional locations across Australia.

Selection of the regions

The choice of location for each State and Territory has been based on several criteria. These include that each is a regional city or town (separate from the metropolitan area of the capital cities), has a population of over 10,000 people, and is a location that FuelTrac data is published for. The chosen regional centres for each State and Territory are outlined in the table below.

REGIONAL CENTRES IN EXPANDED INDEX

Centre	State/Territory	Approx. population
Wagga Wagga	NSW	50,000
Geelong	VIC	180,000
Townsville	QLD	180,000
Bunbury	WA	75,000
Mount Gambier	SA	28,000
Launceston	TAS	85,000
Alice Springs	NT	27,000

As with the primary Index, a choice of suburb within each city/town is also required. This is because a number of the sources for the costs in the Index require a suburb and street address to generate an estimate. The suburb proposed to be used for each location has been based on several factors, in order to be consistent with the primary Index and to be representative of the different regional populations. These factors include:

- Having a relatively dense population at the SA2 level,
- Being a middle to outer suburb (i.e. somewhere not accessible to the city centre by walking or cycling for the average person),
- Having a median age similar to the average ages in the hypothetical household from the primary Index,
- Having median incomes similar to the median for the whole city/town,
- Being an area that has a reasonable proportion of detached housing, and
- Having a substantial proportion of couple family households with children.

Income and transport patterns in the regions

Research from a range of data sources, including the 2011 Census, State travel surveys and BITRE analysis shows that the average number of kilometres travelled per household per year varies between cities and depends on the specific characteristics of a city, and on characteristics other than size.

As such, the method of calculating the car usage for each location has been based on data on the average commuting distance from the BITRE analysis from 2015 for each centre based on their size and location.

The BITRE 2015 report calculates the average commuting time by SA4 and other geographies. SGS has drawn estimated commuting distances for each regional centre as follows:

- SA4 commuting time was used for Townsville, Launceston, Bunbury, Geelong, as these SA4s were mostly centred around the regional city.
- Wagga Wagga and Alice Springs were in the middle of very large SA4s, the remote areas of which may have skewed overall SA4 commute distances. Therefore, these were allocated the average commuting distance of inland SUAs for populations of over 30,000 and between 10,000 and 30,000 respectively.
- Likewise, Mount Gambier was in the middle of a large SA4. It was allocated the commute distance of a coastal SUA with a population between 10,000 and 30,000.

These estimated commuting distances were divided by the average commuting distance of the capital city in that State/Territory. This ratio was then multiplied by the car use distance of the master household to estimate the car use for the hypothetical household in regional cities, as shown in the table below. These figures have been used as inputs in the Index.

CALCULATION OF CAR USE FOR EACH REGIONAL LOCATION

Regional centre	Average commute distance	Capital city average commute distance	Ratio (regional/capital)	New car kilometres	Used car kilometres
Wagga Wagga	10.4	15.0	0.69	10,400	6,933
Geelong	18.3	14.6	1.25	18,801	12,534
Townsville	12.2	14.9	0.82	12,282	8,188
Bunbury	19.0	14.9	1.28	19,128	12,752
Mount Gambier	14.1	12.4	1.14	17,056	11,371
Launceston	15.2	13.5	1.13	16,889	11,259
Alice Springs	12.8	12.3	1.04	15,610	10,407

Source: Base on BITRE 2015 report data.

The incomes used for the regional locations have been calculated as a proportion of the average income for the State/Territory (the figures used for the capital cities), using data from the 2011 Census. The income for Wagga Wagga has been determined in relation to the income used for NSW; Geelong in relation to Victoria; and so on. From this, a ratio was calculated for the relation of the regional location to the State average, as shown in the table below. This was then used to estimate the income for each regional location.

For example, the household income of a couple family with children in Wagga Wagga was 92.57% of the income of the average NSW income for a couple family with children. The Index has therefore calculated the income for Wagga Wagga as 92.57% of the master household's income.

The relevant 2016 Census income data by family type is due to come out later in October 2017. This will be incorporated into this report when it becomes available, along with any adjustments to the model to reflect changes in income patterns.

CALCULATION OF INCOME RATION FOR REGIONAL LOCATIONS, 2011 CENSUS

Regional location	Weekly income for regional city, couple with children	State	State weekly income, couple with children	Regional/state ratio
<i>2011 Census</i>				
Wagga Wagga	\$2,054	NSW	\$2,219	92.57%
Geelong	\$2,017	VIC	\$2,118	95.22%
Townsville	\$2,221	QLD	\$2,128	104.35%
Bunbury	\$2,270	WA	\$2,374	95.63%
Mount Gambier	\$1,775	SA	\$2,008	88.38%
Launceston	\$1,885	TAS	\$1,857	101.50%
Alice Springs	\$2,407	NT	\$2,887	83.38%

Source: ABS 2011 Census.

Assumptions for regional centres

For consistency between the Index and the expansion, there are several cost inputs that will be the same for the capital cities and the regional centres. This is because a number of the Index cost components are consistent across the State level, and as such, there are no cost differences for households in regional areas compared to capital cities. The inputs that will be consistent across the capital cities and the regional area in the same State/Territory are outlined below and in the table below.

INPUTS CONSISTENT BETWEEN CAPITAL AND REGIONAL LOCATIONS

Input	Relevant components of Index	Sources
Consumer Price Index (CPI)	Maintenance for used car Cost of tyres for both cars	ABS (by capital city)
Annual cost of roadside assistance	Roadside Assistance	AAA member organisations (by State)
New vehicle purchase prices	Car purchase Inputs to some insurance costs	Manufacturer websites (by postcode)
Interest rates on car loans	Car purchase	Canstar website (by State)
Fixed-price servicing for new car	Maintenance for new car	Manufacturer websites
Annual cost of driver licences	Cost of driver licences for both adults	Relevant government authorities (by State)

The next table lists the values and assumptions that will differ between regional centres and the capital city master household. These have been allowed to vary due to known cost differences and reliable data on how the costs will vary.

For example, fuel costs are generally more expensive in regional areas due to lower levels of competition and the need to transport fuel over longer distances. Insurance and CTP vary due to different risks faced by regional city areas compared to their capital city, such as different levels of crime, a greater share of driving on high-risk country roads and so forth.

ASSUMPTIONS CHANGED FOR REGIONAL CENTRES

Input	Relevant components of Index	Sources
Number of kilometres travelled for new and used car	Fuel costs for each car Insurance in some States	Survey of Motor Vehicle Use (by State) BITRE data on commuting distances
Fuel use – rates of consumption and proportion of fuel type	Fuel costs	Survey of Motor Vehicle Use (by State)
Annual cost of comprehensive insurance	Comprehensive insurance costs	AAA member providers (by State and/or postcode)
Annual registration and CTP costs	Registration and CTPI costs	Relevant government websites (by State and/or postcode)
Base cost for used car maintenance and tyres	Maintenance cost for used car Tyre costs for new and used car	HES (by State)

1. INTRODUCTION

1.1 The original Transport Affordability Index

In 2016, SGS Economics and Planning (SGS) worked with the Australian Automobile Association (AAA) to develop the Transport Affordability Index. The Index was designed to act as an indicator of movements in the price of transport costs in each of Australia's capital cities. The Index has been updated by AAA on a quarterly basis using a range of publicly available data sources.

The costs included in the Index were chosen to be representative of typical Australian households, taking into account:

- The availability of data reflecting the share of household budgets that are spent on transport,
- The ability to update the Index every quarter, and
- The range of expenses associated with different forms of transport that households are likely to face.

The Index has been updated and re-released quarterly since then. More information on the original Transport Affordability Index can be found at <http://www.aaa.asn.au/storage/aaa-transport-affordability-index.pdf>.

1.1 Purpose of this extension

As a first step in expanding the Index, the AAA has asked SGS to identify and develop an Index incorporating a further seven locations, one in each State and Territory outside of the capital cities (excluding the ACT). This will allow for the Index to reflect the differences in costs for households in regional areas compared to Australia's capital cities. The expansion is also intended to be comparable to and be updated with the primary AAA Index on a quarterly basis.

2. SELECTION OF THE REGIONS

The extension of the Index includes one additional location for each State and Territory outside of the major capital city areas. Due to its small size and a lack of discernible differences in costs between suburbs, a second location for the ACT is has not been included.

2.1 Criteria for regional selection

The choice of location for each State and Territory has been based on several criteria. These include that each is a regional city or town (separate from the metropolitan area of the capital cities), has a population of over 10,000 people, and is a location that FuelTrac data is published for. The chosen regional centres for each State and Territory are outlined in Table 1 below.

TABLE 1: REGIONAL CENTRES IN EXPANDED INDEX

Centre	State/Territory	Approx. population
Wagga Wagga	NSW	50,000
Geelong	VIC	180,000
Townsville	QLD	180,000
Bunbury	WA	75,000
Mount Gambier	SA	28,000
Launceston	TAS	85,000
Alice Springs	NT	27,000

Source: ABS 2011 Census.

As with the primary Index, a choice of suburb within each city/town is also required. This is because a number of the sources for the costs in the Index require a suburb and street address to generate an estimate. The suburb used for each location has been based on several factors, in order to be consistent with the primary Index and to be representative of the different regional populations. These factors include:

- Having a relatively dense population at the SA2 level,
- Being a middle to outer suburb (i.e. somewhere not accessible to the city centre by walking or cycling for the average person),
- Having a median age similar to the average ages in the hypothetical household from the primary Index,
- Having median incomes similar to the median for the whole city/town,
- Being an area that has a reasonable proportion of detached housing, and
- Having a substantial proportion of couple family households with children.

The demographic characteristics and rationale behind the choice of each regional centre for the expanded Index are outlined below.

2.1 Justification for selection of regions

New South Wales – Wagga Wagga

Wagga Wagga has a population of around 50,000, the majority of whom work within the city or the immediately surrounding region. At the last Census, over 80% of dwellings in Wagga Wagga were detached houses. Around a quarter of families in the city were couples with children, and around 37% of households owned two cars.

Koorlingal is in the Wagga Wagga – East SA2, which has a population density of 320.6 persons per square kilometre, one of the highest for the Wagga Wagga region.¹ The Koorlingal suburb was chosen because it is broadly reflective of the characteristics of Wagga Wagga as a whole in its median income, and because its median age is also similar to the ages in the hypothetical household, at 37. Koorlingal is also a long enough distance away from Wagga Wagga's centre that most people commuting there would be unlikely to walk or cycle, and 37% of households owned two cars at the last Census. The suburb also has a high proportion of detached houses (83%).

Victoria – Geelong

Geelong is Victoria's second largest city, with a population of over 180,000. Around 10% of Geelong's workers commuted to Melbourne for work at the 2011 Census, however, the majority of residents still work within Geelong itself. The median age for Geelong at the last Census was 38, in line with the hypothetical household. Around a quarter of families in the city were couples with children, and over 80% of dwellings were detached housing types.

Hamlyn Heights has been chosen as the proxy suburb for Geelong as it is broadly representative of the hypothetical household's characteristics. North-west of the city centre, the suburb is part of the Geelong West – Hamlyn Heights SA2, which has a population density of 624.9 persons per kilometre, and the median income and age are in line with that of Geelong overall. Around 36% of households in Hamlyn Heights owned two cars at the last Census, and 89% of dwellings in the suburb were detached houses.

Queensland – Townsville

Townsville has a population of around 180,000, with the vast majority of people working within the city and its surrounding region. Over 75% of dwellings in Townsville at the last Census were detached houses, and over a quarter of families living in the city were couples with children, though the median age in Townsville was slightly lower than the assumed ages for the hypothetical household. Around 39% of households owned two cars.

Currajong has been selected as the proxy suburb for Townsville, as part of the Gulliver – Currajong – Vincent SA2, which has a population density of 1701.9 persons per square kilometre (one of the highest in the Townsville region). East of the city centre, Currajong has a similar median income level to Townsville's median, and a median age of 37, in line with the hypothetical household ages. Around 33% of households in Currajong owned two cars at the last Census, and around 77% of houses in the suburb were detached dwellings.

Western Australia – Bunbury

Bunbury's population is around 75,000, with most workers employed within the city and surrounding suburbs. Over 80% of dwellings in Bunbury were detached houses at the last Census, and around 27% of families were couples with children. Around 40% of households had two cars, and the median age in Bunbury is 36, in line with the hypothetical household.

Eaton has been chosen as the proxy suburb for Bunbury, as it is in the Eaton – Pelican Point SA2, which has the highest population density in the Bunbury region at 1201.5 persons per square kilometre. Eaton's median income is in line with the median for Bunbury overall, around 43% of households owned two cars at the last Census, and the median age for the suburb was 35, similar to the hypothetical household. Eaton also had a very high proportion of detached houses (around 91% at the 2011 Census).

¹ Population densities identified for each location based on ABS data for 2015-16 – Tables 1-7, 'Population Estimates by Statistical Area Level 2, 2006 to 2016,' *Regional Population Growth, Australia, 2015-16*, Cat. No. 3218.0, released 30 March 2017, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3218.02015-16?OpenDocument>

South Australia – Mount Gambier

South Australian cities outside of Adelaide are generally smaller than in the other States, and as such Mount Gambier's population of 28,000 is smaller than most of the other regional centres chosen. However, its median age of 37, high proportion of detached houses (80%), and comparatively high proportion of couple families with children (22.3%) are generally reflective of the hypothetical household. The vast majority of residents living in the city also worked within Mount Gambier at the last Census.

There is currently only one suburb within the city of Mount Gambier. The proxy address chosen for Mount Gambier is from an area where it is far enough away from that city centre that most people would not choose to walk or cycle there for work.

Tasmania – Launceston

Launceston is Tasmania's second largest city, with a population of over 85,000, and most people who lived in Launceston in 2011 worked within Launceston itself or the surrounding region. Around 33% of households owned two cars, around 80% of dwellings were detached houses, and around 22% of families were couples with children. The median age in Launceston in 2011 was 38, in line with the hypothetical household.

The proxy suburb selected for Launceston is South Launceston, in the SA2 of South Launceston which has a population density of 1747.0 persons per square kilometre (the highest for the Launceston SA3). The median age for the suburb is 35, and the median income is close to the median for the city as a whole. South Launceston also had a similar proportion of households that owned two cars (around 33%) to Launceston overall. Around 73% of dwellings in the suburb were detached houses, and around 34% of families were couples with children.

Northern Territory – Alice Springs

Alice Springs has a population of around 27,000, and in 2011, the vast majority of the working population had jobs in the city and its surrounds. The median age in Alice Springs is 33, which is lower than the hypothetical household, but is reflective of the lower median age across the Northern Territory in general compared to the States. Alice Springs had a lower but still substantial proportion of detached dwellings (around 57%) than the other regional centres. The city also had a similar proportion of both couple families with children (around 22%) and households with two cars (around 33%).

The suburb of East Side is in the SA2 of East Side, which has a population density of 229.2 persons per square kilometre and is one of the highest densities in the Alice Springs area. East Side has a median age of 35, closer to the hypothetical household than other suburbs in the city. The median income is close to the median for Alice Springs overall, as is the proportion of households that own two cars (around 34%), and the proportion of detached dwellings in the suburb (around 64%). East Side is also a middle-to-outer suburb, meaning that most households would need to travel by car or public transport to get to the city.

3. INCOMES AND TRANSPORT IN REGIONS

In order for the expanded Index to reflect differences between the transport costs of households in the capital cities and those in regional areas, differences in both travel patterns and levels of income need to be identified and incorporated into the Index's calculations.

3.1 Transport use in regional Australia

Public transport

In the primary Index, it has been assumed that one of the adults in the hypothetical household drives to work, and the other takes public transport. While there are public transport services available in the regional locations, these services tend to be far more limited and less frequent than those found in the capital cities. Data from the 2011 Census suggests that in the selected regional centres, the proportion of people using public transport to travel to work was also very small, as shown in Table 2.

TABLE 2: PROPORTION OF RESIDENTS USING PUBLIC TRANSPORT, 2011

Centre (UCL)	Car as driver or passenger	Public transport
Wagga Wagga	78.0%	0.8%
Geelong	72.0%	5.4%
Townsville	74.4%	1.9%
Bunbury	75.1%	3.8%
Mount Gambier	78.8%	0.6%
Launceston	73.4%	2.0%
Alice Springs	68.5%	3.3%

Source: ABS 2011 Census QuickStats, by Urban Centre/Locality (UCL).

As such, for the regional locations in the Index, the assumption is used that both adults in the hypothetical household will drive to work, and neither will use public transport. However, should travel patterns change in future, there is space included in the Index for these costs to be counted for each of the regional locations.

Car use

To reflect the differences in patterns of car use between the capital cities and regional locations, and that the second person in the hypothetical household in the regional centres also drives to work rather than uses public transport, different assumptions about car use in the Index needed to be made. The assumptions on car use are important to the calculation of fuel costs and some of the estimates around insurance.

In the primary Index, it was assumed that the new car in the hypothetical household would be driven 15,000 kilometres per year, and the second-hand car 10,000 kilometres per year, based on the Australian average of around 13,000 kilometres.

There are a number of potential sources that could be used to determine the difference between car kilometres travelled in the regional and capital cities. These include:

- BITRE data,
- State travel surveys, and
- Census journey to work data.

The State travel surveys, such as VISTA in Victoria, can be used to see how travel distances change between regional and city locations. However, there are a number of difficulties with using these state-based sources. Many of these surveys are quite old, use very different methodologies, and often do not include the regional centres chosen for the Index. This makes it harder to generate an accurate estimate of current travel patterns.

Analysis of Victorian and Queensland travel surveys also shows conflicting evidence of whether people living in regional centres typically travel more or less than people in capital cities. For example, the VISTA survey shows that Geelong residents typically travel 36 kilometres per day, while Melbourne residents travel 31 kilometres, suggesting that those in regional areas travel more than those in the capital cities. However, in the Queensland survey, it was shown that people in Townsville and Cairns typically travelled fewer kilometres than people in Brisbane.

Census Place of Work data from 2011 could be used to estimate the average commuting distance of people in the chosen centres, which could then be used to estimate the number of kilometres driven per year for each car. Table 3 below shows the distance from the suburb of residence to the CBD in regional areas, and suggests that commutes for regional areas are much, much shorter than the equivalent trip distance in the capital cities. For example, the trip from the chosen suburb in Townsville to the Townsville CBD is six kilometres, or less than one-fifth of the estimated journey to work from Beenleigh (the Queensland master household) to the Brisbane CBD. The Queensland travel surveys, however, suggest that Townsville residents travel only 20% less on a typical weekday than Brisbane residents.

TABLE 3: DISTANCE TO WORK – CENSUS 2011

Regional location	Distance to CBD from suburb	Weighted average distance for commuters to CBD	Master household distance to work
Wagga Wagga	4km	8km	63km*
Geelong	6km	12km	14km
Townsville	6km	10km	34km
Bunbury	10km	10km	33km
Mount Gambier	3km	8km	10km
Launceston	4km	7km	8km
Alice Springs	4km	5km	13km

Source: ABS 2011 Census.

*Shortest time in peak periods, includes tolls. M4 has the shortest travel time at 56km in off-peak periods.

It is likely that general estimates based on journey to work data from the Census, which show that those in regional areas have longer commutes, are skewed by a significant minority who travel between regional cities and towns, and those who travel to or from remote areas to work. While these trips are longer in distance, they can also be undertaken in a similar timeframe to city-based commutes, due to the absence of congestion. For example, around 3% percent of people who worked in the Bunbury CBD at the 2011 Census commuted from Busselton, just over 50 kilometres away. This trip can be taken in 39 minutes. By comparison, a trip of a similar distance – Sydney CBD to Penrith on the M4 in peak hour – would take one hour and 23 minutes, or over twice as long.

BITRE analysis from 2015² reflects this pattern, and estimates that average commutes in regional areas are significantly longer in distance than the average for city areas. However, this assumption contradicts the base assumption in the Index that the workers in the hypothetical household are employed in the city centre of their respective locations, as the smaller size of the regional centre means that they will travel fewer kilometres than the capital city households to their respective CBDs.

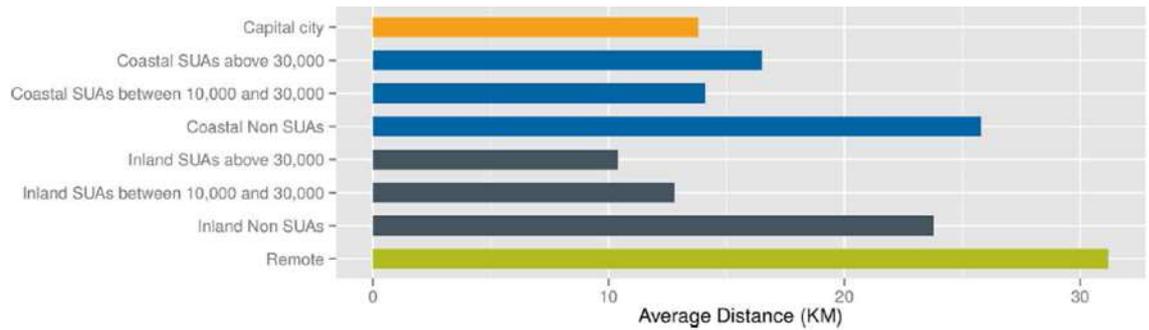
The same BITRE report in 2015 broke down the distance travelled by coastal (within 50 kilometres of the coast) and inland areas, and by significant urban areas (SUAs) larger than

² BITRE, 2015, 'Australia's Commuting Distance: Cities and Regions,' https://bitre.gov.au/publications/2015/files/is_073.pdf

30,000 people, between 10,000 and 30,000 people, and smaller. This is illustrated in Figure 1. The report found that:

- Coastal SUAs had slightly longer commutes than capital cities, while inland SUAs had slightly shorter commutes. This may be because households whose employment is anywhere near the beach prefer a longer commute if a home close to the beach is possible, while no such incentive exists in inland areas, and
- Non-significant urban areas and remote areas had much longer commutes than capital cities or SUAs of any size.

FIGURE 1: AVERAGE COMMUTING DISTANCES – BITRE ANALYSIS



Source: BITRE, 2015.

Method used for the Index

It is very difficult to use the above information to design some sort of rule to estimate how the kilometres travelled in regional centres will differ from kilometres travelled in the CBD. The information we have, from this data and other sources, is:

- There is no consistent pattern across the states as to whether the regional centre chosen will have a shorter or longer commute than the master household, and by how much.
- Regional centres that are relatively close to the capital city tend to have longer commutes and people drive longer distances than in capital city households, as travelling from the regional centre to the capital city on a semi-regular basis is feasible; while regional centres that are far from their capital city tend to have shorter commutes than the capital city.
- In general, coastal towns tend to have longer commutes than their capital city while inland towns tend to have shorter commutes than the capital city, although this is not always the case.
- There is no consistent relationship between city size and commuting time.
- Residents of Townsville and Cairns travel fewer kilometres per day than residents of Brisbane, but residents of Geelong and other areas of regional Victoria travel more kilometres per day than residents of Melbourne.
- Capital city residents undertake a greater share of their trips on public transport than the regional centre.
- The smaller the city, the less likely its residents are to use public transport.
- Residents of regional areas tend to travel relatively shorter distances for work and longer distances for social and recreational activities than residents of capital cities, as shown by VISTA data, although this may be skewed by the fact that Geelong is within an hour or so of Melbourne where a large range of recreational activities are available, a factor which is not present in other cities.

Given these findings, it would not be feasible to assume that regional towns simply travelled a given percentage more or less than their capital city counterparts, as the data clearly shows it varies between cities and depends on the specific characteristics of a city, and on characteristics other than size.

As such, the method of calculating the car usage for each location has been based on data on the average commuting distance from the BITRE analysis from 2015 for each centre based on their size and location.

The BITRE 2015 report calculates the average commuting time by SA4 and other geographies. SGS has drawn estimated commuting distances for each regional centre as follows:

- SA4 commuting time was used for Townsville, Launceston, Bunbury, Geelong, as these SA4s were mostly centred around the regional city.
- Wagga Wagga and Alice Springs were in the middle of very large SA4s, the remote areas of which may have skewed overall SA4 commute distances. Therefore, these were allocated the average commuting distance of inland SUAs for populations of over 30,000 and between 10,000 and 30,000 respectively.
- Likewise, Mount Gambier was in the middle of a large SA4. It was allocated the commute distance of a coastal SUA with a population between 10,000 and 30,000.

These estimated commuting distances were divided by the average commuting distance of the capital city in that State/Territory. This ratio was then multiplied by the car use distance of the master household to estimate the car use for the hypothetical household in regional cities, as shown in Table 4 below. These figures have been used as inputs in the Index.

TABLE 4: CALCULATION OF CAR USE FOR EACH REGIONAL LOCATION

Regional centre	Average commute distance	Capital city average commute distance	Ratio (regional/capital)	New car kilometres	Used car kilometres
Wagga Wagga	10.4	15.0	0.69	10,400	6,933
Geelong	18.3	14.6	1.25	18,801	12,534
Townsville	12.2	14.9	0.82	12,282	8,188
Bunbury	19.0	14.9	1.28	19,128	12,752
Mount Gambier	14.1	12.4	1.14	17,056	11,371
Launceston	15.2	13.5	1.13	16,889	11,259
Alice Springs	12.8	12.3	1.04	15,610	10,407

Source: Based on BITRE 2015 report data.

3.1 Incomes in regional Australia

Due to the variation between average incomes in the capital cities and those of regional areas, an estimate of the difference between the two is required to be used in the Index. This is important to the Index output of weekly transport costs as a proportion of income.

In the primary Index, the household incomes used for each capital city have been based on the Household Income and Wealth (HIW) survey, and updated with changes in Average Weekly Earnings (AWE). The average income for each State/Territory was used as the proxy for each capital city, and thus cannot be used for the regional centres.

There are a number of potential ways of estimating the differences between the capitals and regional centres. However, because the chosen regional centres vary in whether their average incomes are higher or lower than the averages in the capital cities, applying a standard ratio compared to the capital city figures is not possible.

The incomes used for the regional locations have therefore been determined as a proportion of the average income for the State/Territory (the figures used for the capital cities), using data from the 2011 Census. The income for Wagga Wagga has been determined in relation to the income used for NSW; Geelong in relation to Victoria; and so on. From this, a ratio was calculated for the relation of the regional location to the State average, as shown in Table 5 below. This was then used to estimate the income for each regional location.

For example, the household income of a couple family with children in Wagga Wagga was 92.57% of the income of the average NSW income for a couple family with children. The Index

has therefore calculated the income for Wagga Wagga as 92.57% of the master household's income.

TABLE 5: CALCULATION OF INCOME RATIO FOR REGIONAL LOCATIONS

Regional location	Weekly income for regional city, couple with children	State	State weekly income, couple with children	Regional/state ratio
<i>2011 Census</i>				
Wagga Wagga	\$2,054	NSW	\$2,219	92.57%
Geelong	\$2,017	VIC	\$2,118	95.22%
Townsville	\$2,221	QLD	\$2,128	104.35%
Bunbury	\$2,270	WA	\$2,374	95.63%
Mount Gambier	\$1,775	SA	\$2,008	88.38%
Launceston	\$1,885	TAS	\$1,857	101.50%
Alice Springs	\$2,407	NT	\$2,887	83.38%

Source: ABS 2011 and 2016 Censuses.

Regional centres do not uniformly have higher or lower median incomes than the state average, with a number of factors influencing relative incomes. For example, Townsville had a significant proportion of workers involved in the mining industry in 2011, as well as in Defence due to the bases located there, which is likely to account for at least some of the higher median income level relative to Queensland overall. Launceston also had a higher median income than the average for Tasmania, which is likely to be in part due to the very low median incomes in some other parts of the State.

These ratios may have changed in the 2016 Census, however the specific data required to calculate these ratios, namely the income of couple families with children by Significant Urban Area, will not be available until the October 2017 release of the Census data.

Updating incomes

While the incomes for the capital cities will be updated using the change in AWE each quarter, the incomes for the regional centres will simply be calculated as a proportion of the relevant capital city, and as such, no additional data is required to obtain the estimates of incomes for the regional centre each quarter.

However, the ratio of the income for the regional centres to the capital cities may change over time, and can be updated with future Census data. It is anticipated that the regional/state ratios used to estimate the incomes for the regional centres will be able to be updated with the release of 2016 Census data in October 2017, when median incomes for couples with children become available for each of the regional centres and capital cities. It is hoped that movements in Average Weekly Earnings, which are used to update incomes in the Index, is sufficient to capture growth in incomes of each city. To the extent that it is not sufficient, adjustments can be made if necessary following new data from the Census, the Housing, Income and Wealth Survey or other relevant surveys.

Preliminary analysis of trends in incomes

Preliminary analysis of median incomes at the State/Territory level suggests that there may have been shifts in income patterns between 2011 and 2016 which could affect the ratio that should be used for each regional location, though this will not be able to be confirmed until the release of the more detailed income data.

Table 6 below shows the median household and family incomes for each State and Territory in 2016, and the proportional change in these since 2011. This suggests that incomes are growing faster in some locations than others.

TABLE 6: MEDIAN INCOMES BY STATE/TERRITORY, 2016 CENSUS

State/Territory	Median household income	Change 2011-2016	Median family income	Change 2011-2016
NSW	\$1,486	20.1%	\$1,780	20.5%
VIC	\$1,419	16.7%	\$1,715	17.5%
QLD	\$1,402	13.5%	\$1,661	14.3%
WA	\$1,595	12.7%	\$1,910	10.9%
SA	\$1,206	15.5%	\$1,510	13.5%
TAS	\$1,100	16.0%	\$1,399	16.4%
NT	\$1,983	18.5%	\$2,105	19.7%
ACT	\$2,070	7.8%	\$2,445	7.4%

Source: ABS 2011 and 2016 Censuses.³

Focusing on the family incomes in particular, Table 7 shows the ratio of the median income in each State/Territory to the average across all the jurisdictions. This is compared to the same ratio for the incomes used in the AAA Index for the quarter the Census was conducted in.

TABLE 7: COMPARISON OF RATIO OF INCOMES TO AVERAGES

State/Territory	Median family income (2016 Census)	Ratio (median income/average)	Incomes used in AAA Index (Q3 2016)	Ratio (income/average)
NSW	\$1,780	0.980	\$2,496	1.017
VIC	\$1,715	0.945	\$2,466	1.005
QLD	\$1,661	0.915	\$2,366	0.964
WA	\$1,910	1.052	\$2,979	1.214
SA	\$1,510	0.832	\$2,170	0.885
TAS	\$1,399	0.771	\$1,906	0.777
NT	\$2,105	1.159	\$2,388	0.973
ACT	\$2,445	1.347	\$2,857	1.165
Average	\$1,816	-	\$2,454	-

Source: ABS 2016 Census and AAA Index.

Median family incomes from the Census are lower than incomes used in the AAA Index as they include single parent and couple only families, both of which have lower incomes than couples with children, which the Index focuses on.

This that Western Australian families appear to be relatively better off in the Index than the Census, and Northern Territory families appear to be worse off in the Index (incomes 97% of average) than the Census (incomes 16% higher than average). This suggests that there may have been shifts in relative incomes in the 2016 Census data that were not picked up by varying growth in average weekly earnings, which may affect the relation of the regional incomes to the capital cities, and the ratios used to calculate incomes in the expanded Index.

Alternatively, it may be that income growth for all families is does not accurately mirror income growth for couples with children. In any case, it would be helpful to check the incomes of couple families with children in the target zones when the data is released in October 2017.

³ Data sourced from ABS Census, *Quickstats*, <http://www.abs.gov.au/websitedbs/D3310114.nsf/Home/2016%20QuickStats>

4. ASSUMPTIONS FOR REGIONAL CENTRES

To allow for consistency between the primary Index and the expanded Index, the method of calculating the costs for the regional centres will be consistent with those of the capital cities, using the same data sources and assumptions where possible. However, some components of the Index have been modified to be able to reflect the characteristics of the seven new locations.

4.1 Assumptions that will remain the same

To ensure consistency between the primary and expanded Indexes, the assumptions around the characteristics of the typical household have been kept the same for the regional centres.

These include:

- Household structure (couple family household with children),
- Age (male adult aged 36, female adult aged 38),
- Employment (both adults travelling to work 5 days per week, in central/most common location), and
- Car ownership and vehicle types (two cars – one new, based on weighted average of base model of top 10 selling cars, and one second hand, based on 10 year old Toyota Corolla base model).

As identified above, the regional locations chosen are broadly reflective of these characteristics, in that families with children are common, labour participation patterns of women with children are similar to those in the capital cities, and households in these centres often own two cars.

Inputs that will be consistent between capital cities and regional areas

For consistency between the Index and the expansion, there are several cost inputs that will be the same for the capital cities and the regional centres. This is because a number of the Index cost components are consistent across the State level, and as such, there are no cost differences for households in regional areas compared to capital cities. The inputs that will be consistent across the capital cities and the regional area in the same State/Territory are outlined below and in Table 8.

TABLE 8: INPUTS CONSISTENT BETWEEN CAPITAL AND REGIONAL LOCATIONS

Input	Relevant components of Index	Sources
Consumer Price Index (CPI)	Maintenance for used car Cost of tyres for both cars	ABS (by capital city)
Annual cost of roadside assistance	Roadside Assistance	AAA member organisations (by State)
New vehicle purchase prices	Car purchase Inputs to some insurance costs	Manufacturer websites (by postcode)
Interest rates on car loans	Car purchase	Canstar website (by State)
Fixed-price servicing for new car	Maintenance for new car	Manufacturer websites
Annual cost of driver licences	Cost of driver licences for both adults	Relevant government authorities (by State)

Consumer Price Index (CPI)

The CPI is reported by capital city, and does not distinguish between regional and city areas. As such, the relevant capital city figure will be used to update the costs for maintenance of the used car and the costs for tyres in the hypothetical household in each regional location each quarter.

Annual cost of roadside assistance

The annual cost for roadside assistance is the same for the regional centres and capital cities, as these costs are determined on a State-by-State basis. Therefore there are no additional inputs required for the regional locations in the Index.

New vehicle purchase prices

It is currently being assumed that the prices for each of the top 10 selling cars will be the same for the regional locations and their relevant capital city. This is because for many of the manufacturers, drive-away prices are consistent no matter the location, and because there is very little difference between the costs for regional postcodes compared to the capital cities for the models that do have different prices by location. The process of collecting separate prices for each car in each location is also likely to add to the amount of time taken to update the Index, but is not likely to alter the overall costs in any significant way.

Should a significant difference between prices in the capital cities and regional areas emerge over time, this can easily be incorporated into the Index.

Interest rates on car loans

Because the Canstar website used to obtain the estimates for the car loan interest rate in the Index only differentiates costs between States/Territories, and because it is being assumed that the weighted average purchase price is the same for the capital cities and regional centres, there is no need to have separate inputs for the regional locations for this component.

Fixed-price servicing for new car

The servicing costs for the new car in the hypothetical household in the primary Index have been based on the relevant manufacturer's fixed-price servicing costs for the first five years after purchase. These costs are the same across all of the capital cities, as the prices do not distinguish between geographic locations. This calculation also involves the assumed number of kilometres travelled by the new car in the hypothetical household.

While the regional locations will be travelling different total yearly distances (as identified in Table 4), SGS has recommended that the new car servicing costs be kept the same for the regional areas as the capital cities for several reasons. One of these is that the difference in kilometres travelled is unlikely to drastically change the total costs of servicing, and like the calculation for the new vehicle purchase prices, would be time-consuming to update if based on the seven different estimates of the kilometres travelled by the new car. It is also the case that many drivers do not adhere to the manufacturers recommended schedule for servicing, and would get their cars serviced at different intervals anyway.

Annual cost of driver licences

The costs for driver licences in each State and Territory are not differentiated by geographic location. The assumptions used in the primary Index for this component (such as selecting the cheapest overall cost option, and so on) will be the same as those used for the regional centres. This means that the costs for the two annual driver licences will be the same for the capital cities and regional centres in each jurisdiction, and no other inputs are needed.

4.2 Assumptions that will change

Table 9 summarises the assumptions and inputs in the Index that will differ to include the new regional locations. The rationale for each of these differences is explained below.

TABLE 9: ASSUMPTIONS CHANGED FOR REGIONAL CENTRES

Input	Relevant components of Index	Sources
Number of kilometres travelled for new and used car	Fuel costs for each car Insurance in some States	Survey of Motor Vehicle Use (by State) BITRE data on commuting distances
Fuel use – rates of consumption and proportion of fuel type	Fuel costs	Survey of Motor Vehicle Use (by State) ...
Annual cost of comprehensive insurance	Comprehensive insurance costs	AAA member providers (by State and/or postcode)
Annual registration and CTP costs	Registration and CTPI costs	Relevant government websites (by State and/or postcode)
Base cost for used car maintenance and tyres	Maintenance cost for used car Tyre costs for new and used car	HES (by State)

Number of kilometres travelled by each car

Difference from the primary Index

As described above in Section 3.1, the expanded Index includes different assumptions on the number of kilometres travelled for each of the regional locations, based on a ratio applied to the assumed 15,000 kilometres and 10,000 kilometres driven by the new and used cars respectively in the capital city hypothetical households. These assumptions affect the costs associated with the purchase of fuel, and some of the insurance components. The number used for each car for each location is shown in Table 4.

Data source and updates

The assumed number of kilometres for the regional centres has been informed by published BITRE data on the average commuting distances in different geographies, which was based on the 2011 Census. The assumptions regarding the overall number of kilometres travelled (and used as the inputs for the capital cities) have been based on the Australian average from the ABS' Survey of Motor Vehicle Use.⁴

This aspect of the Index does not need to be updated each quarter. However, the release of new Census data may be able to be used to update the ratio between the capital cities and regional areas in the number of kilometres travelled. New releases of the Survey of Motor Vehicle Use (generally done every two years) will also provide the opportunity to update the assumptions on the Australian average for kilometres travelled. The most recent release of the Survey in 2016 suggests there has been little change in the total number of kilometres driven compared to the 2014 survey, and as such, the base assumptions for the new and used car (15,000 kilometres and 10,000 kilometres respectively) in the capital city households have been maintained.

Fuel use

Difference from the primary Index

Assumptions on fuel use in the primary Index were based on the Survey of Motor Vehicle Use, and include the proportion of the use of different types of fuel and average rates of fuel consumption per litre per 100 kilometres.

In the primary Index, the assumptions on average rates of fuel consumption were based on the average for passenger vehicles using petrol in the 2014 Survey for cars manufactured after 2009 (to represent the new car in the household) of 10.0L/100 km, and cars manufactured between 1999 and 2008 (to represent the used car) of 10.8L/100km. The rates

⁴ See ABS, Survey of Motor Vehicle Use, Australia, Cat No. 9208.0, most recent release 22 March 2017, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/9208.0Main+Features112%20months%20ended%2030%20June%2016?OpenDocument>

for the expanded Index will use the corresponding values from the 2016 release of the Survey, of 10.4L/100km and 10.7L/100km for the new and used cars respectively, and will apply to both the capital cities and regional locations.

The rates of fuel consumption for the regional centres have been kept consistent with the capital cities due to the assumption of the Index that the regional households are driving the same car models, and thus that they will have the same rate of fuel efficiency. Though there are likely to be differences between average rates of fuel consumption in regional areas compared to capital cities (as is suggested by forthcoming data to be released from BITRE), this is likely reflecting that regional areas may be more likely to have older and/or larger cars which are less fuel efficient than smaller cars designed for urban conditions, and is not reflective of the mix of cars chosen to represent the hypothetical households in the Index.

With regard to the types of fuel used, in the primary Index it has been assumed that the proportion of petrol fuel use is 86% and diesel 14%. The use of LPG and other types of fuel has been excluded as they make up a very small proportion of overall use, and because there is limited reliable data available on their costs. Recently released data from BITRE⁵ has suggested that drivers in regional areas typically use a much higher proportion of diesel fuel as opposed to petrol than drivers in the capital cities. To allow the Index to reflect this, the proportion of petrol and diesel fuel use by the hypothetical households in the Index has been differentiated between the capital cities and regional locations. The default setting for fuel use in each region in the model is still 86% and 14%, will be updateable using future BITRE releases.

Data source and updates

The fuel costs for the regional locations will be sourced from the FuelTrac data that has been used for the capital cities in previous Index updates.

The assumptions on average rates of fuel consumption will remain consistent until future releases of the Survey of Motor Vehicle Use (generally every two years), when the rate of consumption per litre per 100 kilometres can be updated for the new and used car.

The proportion of petrol and diesel fuel use will be updated with changed patterns of consumption in the Motor Vehicle Use Survey. The proportions should be updated by ignoring fuel sources that have less than 5% market penetration, such as LPG.

Annual cost of comprehensive insurance

Difference from the primary Index

The method of obtaining the estimates for the annual cost of comprehensive insurance for both the new and used car will be the same as that for the capital cities, but there will be some differences in the inputs used. As with the primary Index, a new base model Toyota Corolla is used as the model for the new car, and a 10-year-old base model Toyota Corolla is used for the used car cost calculations.

The main differences will be in the postcodes and addresses used as inputs for each of the regional locations. Some of the cost calculators also require an estimate of the number of kilometres driven per year, for which the figures for the new and used car identified in Table 4 for the relevant regional location can be used.

The agreed value of the car is also needed for some of the cost estimates. As identified in Section 4.1, the weighted average purchase price for the new car can be used for both the regional and capital city locations. Where required, the assumed value for the used car (currently \$7,000) can also be used for the regional locations.

⁵ See BITRE 2017, 'Spending by Australian households on owning and operating vehicles,' Information Sheet 86, https://bitre.gov.au/publications/2017/files/is_086.pdf

The remaining other inputs required for each cost calculator will be kept the same for the regional centres as those used for the primary Index updates to date, to reflect the hypothetical household characteristics. This includes the ages of the drivers, that each has a good driving record, the level of excess, and so on.

Data source and updates

As with the primary Index, cost estimates for insurance for the new and used car in the regional households will continue to be sourced from the AAA member provider websites, using the inputs as described above. Over time, if inputs such as the assumed number of kilometres for each location change, the inputs used in the cost calculator will simply need to change to reflect this.

The value of the 10-year-old Corolla has been sourced from Red Book, with the figure of \$7,000 used for the 2017 quarters. This figure should be sense-checked and updated if required each year.

Annual cost of registration and CTP insurance

Difference from the primary Index

Like the calculation for the cost of comprehensive insurance, the method and most of the inputs for calculating the cost of registration and CTPI for both cars will be the same as for the capital cities, including elements such as the age of the driver, inputs around tax entitlements and so on, as previously used for the primary Index updates. As some State cost estimators require an estimate of the number of cylinders, tare weight, and so on, the same figures as used for the capital cities can be used for the regional centres (as it is being assumed they are driving the same weighted average model of car).

The major difference in obtaining the estimates for the regional locations will be in the postcode used for each estimate. As identified previously in the development of the primary Index, the postcode used in calculating the CTPI estimate can have a significant effect on the total cost.

Data source and updates

Like the primary Index, cost estimates for registration and CTP insurance will be updated using the relevant government websites for both the capital cities and regional centres. The same inputs regarding the driver's age, driving history and so forth should be used. However, as the make-up of the top 10 selling cars changes, inputs such as the weighted average tare weight or engine size may also change and will need to be used where required.

Maintenance for used car and tyres

Difference from the primary Index

The method for calculating the maintenance costs for the used car and the household cost for tyres in the regional locations will be the same as the calculations for the capital cities in the primary Index, however, the source of the base cost obtained from the 2009-10 HES is different.

Data source and updates

The primary Index used the capital city figure from the HES for the average weekly cost of vehicle servicing and the average weekly cost of tyres, with the figures updated to current dollars using the CPI. The same method has been applied to the costs for the regional households, except the base cost used is the "All Households" cost for each State/Territory (rather than the capital city cost). In the 2009-10 HES, these costs by State/Territory can be found in Table 27A, and are shown below in Table 10 in comparison with the costs for the capital cities. It shows that regional centres, on average, pay more for vehicle servicing and

tyres and tubes than capital cities, with the exception of the NT. This may be due to the more competitive environment for car servicing in cities driving costs down, or it may be due to older cars being more common in regional areas, which would have higher servicing costs.

TABLE 10: MAINTENANCE AND TYRES BASE COSTS – HES 2009-10

State	Vehicle servicing (including parts and labour)		Tyres and tubes	
	Capital city (used in primary Index)	Regional location	Capital city (used in primary Index)	Regional location
NSW	\$15.56	\$18.36	\$2.83	\$3.43
VIC	\$9.55	\$10.32	\$3.06	\$3.35
QLD	\$18.15	\$18.35	\$3.57	\$3.78
WA	\$10.84	\$11.73	\$2.84	\$3.19
SA	\$14.82	\$12.45	\$3.45	\$3.64
TAS	\$12.88	\$14.25	\$2.97	\$3.43
NT	\$18.59	\$17.23	\$5.35	\$5.10

Source: ABS, Household Expenditure Survey, Australia, Detailed Expenditure Items, 2009-10.⁶

This change does not mean that there are any additional inputs required for this calculation in the Index for the regional centres in future updates.

However, future releases of the HES could be used to update the base cost for both the capital city and regional locations for each of these elements. The next release of the HES is expected in October 2017, and these costs for vehicle servicing and tyres should be reviewed for the release of the Q4 2017 AAA update to the Index.

4.3 Assumptions and inputs with no costs for regional centres

There are currently a number of components of the expanded Index that will have zero dollar values for the regional centres.

Public transport

As explained above in Section 2.1, the assumption for the regional locations in the Index will be that the second person in the hypothetical household will drive to work rather than take public transport. Therefore, there will be no costs for public transport in the Index for the regional locations, unless transport patterns change in which case the relevant costs are able to be included in the Index model.

Toll roads

As there are currently no toll roads in the chosen regional centres, there will be no costs counted in the Index for toll charges. However, as with the capital cities in the primary Index which do not currently have toll roads, there is space include in the Index for costs to be added if toll roads are introduced at a later date.

Parking, ride-sharing and other costs

Currently, there are no costs attributed to parking, taxis, ride-sharing or cycling as part of the calculation in the primary Index, due to a lack of accurate data on how much households typically spend on such services. There is no nationally consistent data source for the costs of parking, which makes estimating the costs for the hypothetical household difficult. Taxis and cycling also only make up a very small proportion of journey to work trips, and there is only limited data available on the usage of ride-sharing services.

For these reasons, the costs will also be kept at zero dollars for the regional locations (as is the case in the primary Index) until more robust data becomes available or transport patterns

⁶ Capital city costs: Table 23A; Regional location costs, Table 27A.

shift substantially. However, there is space included in the Index to allow for such costs to be added in future.

5. OTHER UPDATES TO THE MODEL

This iteration of the model has also considered other new data sources and information to keep the model up to date. It has been two years since the model was built, and new data sources have been released that could be used to allow the Index to better align with current trends in transport costs. These are discussed in this section.

5.1 New feature: premium fuel use

FuelTRAC currently publishes data on regular unleaded petrol and diesel use by region. It does not have regular series on the prices of premium or high octane petrol, which is more expensive than unleaded. The market for premium petrol has been growing due to a greater share of new cars requiring premium petrol, and concerns about ethanol in regular unleaded fuel. AAA has indicated that in New South Wales, close to half of all petrol sold is premium petrol, which means that fuel costs may be understated.

The lack of regular information on premium petrol prices was a barrier to incorporating it into the previous Index. However, with the increasing importance of premium fuel use, AAA is considering establishing a means to estimate the cost premium of premium petrol as opposed to regular unleaded. The Index model has been adapted to allow for a proportion of fuel use to be allocated to premium fuel to be included in future releases once a reliable estimate of costs is determined.

5.2 Review of data sources

Since the original model was developed, new Census income data and new information on motor vehicle use has been made available and new Census data is expected to be released in the next few months.

Survey of Motor Vehicle Use

As identified above in Section 4.2, the assumptions used in the Index have been based on the Survey of Survey of Motor Vehicle Use. The relevant figures from the Survey used in the Index calculations include the proportion of the use of different fuel types and average rates of fuel consumption per 100 kilometres.

The initial figures used in the primary Index were sourced from the 2014 Survey, where it was assumed that for the new car fuel consumption would be 10L/100km and for the used car 10.8L/100km. With the regional expansion, the figures used for both the capital city and regional locations have been updated with figures from the recently released 2016 Survey. As described previously, the figures for fuel consumption to be used in the Index are 10.4L/100km for the new car, and 10.7L/100km for the used car.

The 2014 Survey was also used to estimate proportions of the use of different fuel types. There was not a significant shift in the proportion of drivers using the different fuel types between the 2014 and 2016 Survey, and as such, the proportion of petrol (86%) and diesel (14%) use have been kept consistent for the regional expansion. The proportions have also been kept the same for the regional centres as the capital cities, though future releases of data on the use of different fuel types in regional as opposed to capital city areas (such as from BITRE) can be used to modify the proportions for each location as required.

Census income data

Incomes in the master Index are based on median incomes of couples with children for the relevant State and Territory, drawn from the ABS' Household Income and Wealth (HIW) series from 2013-14.⁷ The HIW series provides data for households at the capital city and 'rest of state' level, meaning that data at the metropolitan level can be distinguished from regional areas. The median incomes used in the primary Index have been updated since from the initial figures in the HIW survey with movements in average weekly earnings.

The release of earnings data from the 2016 Census allows us to compare the incomes of the master households as calculated by the Index against the incomes reported in the Census. In particular, we are interested to see if the relativities have changed, and, for example, if Census income suggests that some cities are better or worse off than the current Index calculations suggest.

As discussed previously, **the relevant income data from the Census for couple family households with children will be made available in October 2017**. This information will be needed to update the relativities used in the Index. SGS' preliminary analysis of household and family median incomes from the Census suggests that there are likely to have been some shifts in the relativities between some locations and the State average, which will need to be incorporated into the Index calculations once the data is released. Waiting until the release of the more detailed Census income data will ensure the estimates in the Index are more robust than if an approximation based on the data that is currently available was used.

⁷ See ABS, 2015, *Household Income and Wealth, Australia, 2013-14*, Cat. No. 6523.0, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6523.02013-14?OpenDocument>

6. CONCLUSION

The addition of seven regional cities to the AAA Transport Affordability Index is intended to improve the coverage of the Index to a broader range of areas across Australia. By adding regional areas, AAA will be able to identify the extent to which regional cities face higher and lower transport costs than capital cities, the extent to which this is offset by higher or lower incomes and to gain a greater understanding of how travel costs vary over time across a wider range of households. This expansion of the Index includes seven new households in the model, with one typical household from a regional city in each state, plus the Northern Territory (ACT has been excluded due to its small size).

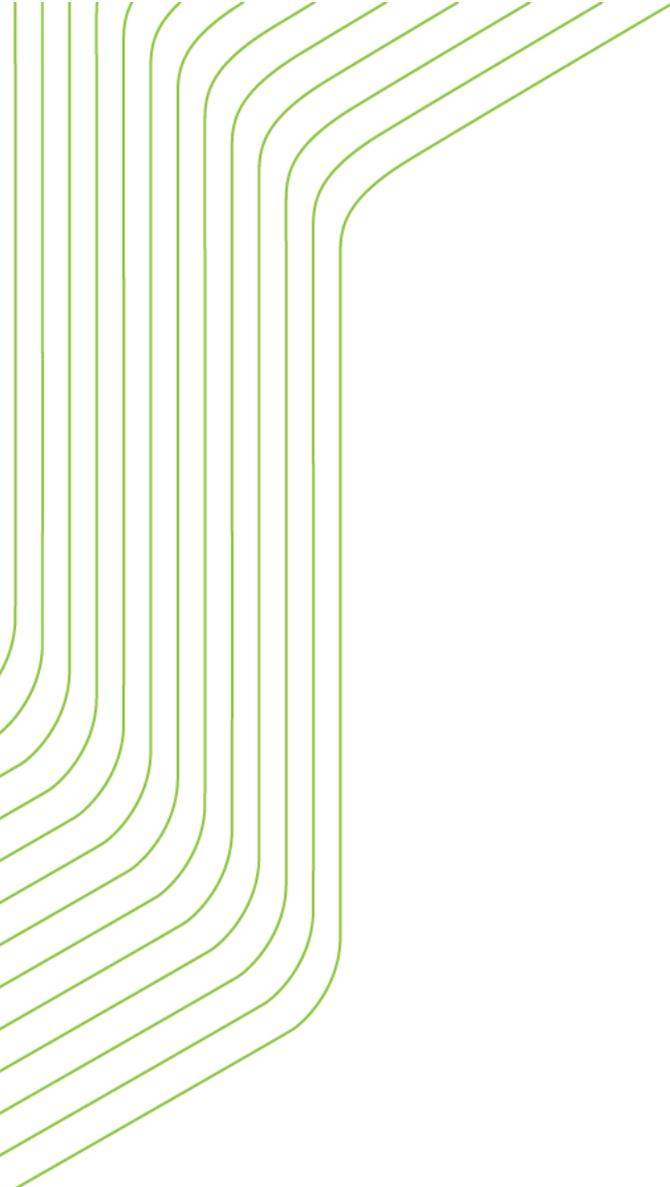
The expansion of the Index began with selecting seven new regional centres. The state associations expressed a desire that these should be significant cities with large populations. The cities chosen were Wagga Wagga, Geelong, Townsville, Mt Gambier, Bunbury, Launceston and Alice Springs. Within each of these centres, a specific SA2 and then a specific street address was chosen, based on the household types, incomes, dwelling types, populations and distance to the city centre, to ensure that the assumptions in the Index would be reasonable for these locations.

Many assumptions and costings are the same in the regional household and the master households. These include the family type assumptions; a heterosexual couple family with two children living in a freestanding house with a lockup garage and a good driving and insurance history, the types of cars driven, purchase price of new cars, interest rates on car loans, drivers' licencing costs and roadside assistance costs. These remain the same between capital cities and regions due to costs being the same across the state or territory, or a decision to ensure the households were as comparable as possible.

Elements of the Index that are allowed to vary will demonstrate how the burden of transport costs differs between capital cities and regional centres. Household incomes, kilometres driven each year, fuel prices, comprehensive insurance, CTP and servicing costs on the second vehicle will all be allowed to vary, based on localised data. Public transport costs and toll road usage will not be included as regional centres are not expected to incur these costs to any significant degree.

These differences will demonstrate the extent to which transport costs are higher or lower in regional cities, and whether the transport burden is higher or lower due to different income levels. It will also allow comparison of these costs and burdens over time.

This analysis serves as a base for State automotive associations to cover a greater number of regional areas if they should choose to do so, or a greater range of households.



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