Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 1 | Aged Pensioners |
|---|---|

**Objective**

Recognizes the impact on council expenditure of providing services to the aged given that aged pensioners are more likely to access these council services.

**Applied to**

The Aged Pensioners Cost Adjustor is applied to the following function within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Aged & Disabled Services | Population > 60 Years and Disabled and Carer Allowances |

**Source data**

- Department of Social Services (DSS), Payment Demographic Data (Centrelink data), June 2023 Quarter (Aged Pensioners, Disability Support Pensioners & Carers) - June 2023.
  https://data.gov.au/dataset/dss-payment-demographic-data

- Australian Bureau of Statistics, Estimated Residential Population, Table 1: ERP, Age by Sex, Local Government Area, at 30 June 2022 (p), Customised Report obtained, September 2023.

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

**Index Construction**

The Victoria Grants Commission has derived an index from the Centrelink Aged Pensioner data by Local Government Areas (LGAs). The aged pension data is taken as a proportion of the total population aged 60 years or greater and disability pensioners. This proportion has been converted into an index across a range between 1.00 - 2.00. This is the "Primary Index".

A state average of the Primary Index is obtained by weighting each council's Primary Index by its estimated population aged 60 years or greater as at June (which is a major cost driver).

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## Example:     Aged Pensioners

| | | |
|---|---|---|
| Minimum Value | 18.41 | Primary Index of 1.00 |
| Maximum Value | 42.91 | Primary Index of 2.00 |

**Primary Index**

**= ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00**

Alpine     = ( (36.37 − 18.41) / (42.91 − 18.41) ) + 1.00

            = 1.733

**Weighted Population Index (WPI)**

**= Primary Index x (Population > 60 Years + Disabled + Carer Allowances)**

Alpine     = 1.733 x 5,266

            = 9,124

**State Average Primary Index**

**= State Total WPI / (Population > 60 Years + Disabled + Carer Allowances)**

State     = 2,870,808 / 1,779,631

            = 1.813

**Cost Adjustor Index**

**= Primary Index / State Average Primary Index**

Alpine     = 1.733 / 1.592

            = 1.089

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 2 | Economies of Scale |
|---|---|

**Objective**    Recognises the economies of scale inherent in providing some local government services to larger populations.

**Applied to**    The Scale Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Governance | Modified Population<br>- adjusted by vacancy rates<br>minimum 20,000 |
| Waste Management | Number of Dwellings |
| Traffic & Street Management | Population |
| Environment | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |
| Business & Economic Services | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |

**Source data**
- Australian Bureau of Statistics, Census 2021 - Selected Dwelling Characteristics, Local Government Area by DWTD Dwelling Type, Occupied and Unoccupied Private Dwellings, downloaded Census TableBuilder, March 2023.
  https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

**Index Construction**    Source data for the Scale cost adjustor is drawn from the above publications, which provide an estimate of the population for each Victorian council as at June.

These values are spread across a range from 2.00 to 1.00 (the "Primary Index"), with the council with the largest population being allocated the maximum value of 2.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver appropriate to that function.

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average.  Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## Example: Economies of Scale

| | | | |
|---|---|---|---|
| Minimum Value | 3,238 | Primary Index of | 1.00 |
| Maximum Value | 392,110 | Primary Index of | 2.00 |

**Primary Index** = ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00

> Alpine = ( (13,578 – 3,238) / (392,110 – 3,238) ) + 1.00
> = 1.973

**Weighted Population Index (WPI)** = Primary Index x Population

> Alpine = 1.973 x 13,578
> = 26,795

**State Average Primary Index** = State Total WPI / Total Population

> State = 10,752,188 / 6,815,373
> = 1.578

**Cost Adjustor Index** = Primary Index / State Average Primary Index

> Alpine = 1.973 / 1.578
> = 1.251

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 3 | Environmental Risk (Fire & Flood) |
|---|---|

**Objective**

Recognises the additional expenditure some councils face associated with flood mitigation and fire control and management.

**Applied to**

The Environmental Risk (Fire & Flood) Cost Adjustor is applied to the following expenditure function within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Environmental Risk (Fire & Flood) | Modified Population - adjusted by vacancy rates doubled to maximum 15,000 |

**Source data**

- Department of Environment, Land, Water & Planning, Planning, Building & Heritage, Planning - Rateable properties affected by BMO GC13, December 2017

- Department of Environment, Land, Water & Planning, Rateable properties affected by 1% flood event, December 2017

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

The risk rating incorporates damage information for events over the period 1900 - 2003. A single risk rating has been provided for each category.

In 2009 the rating for bushfires was doubled, in response to the Victorian bushfires in February 2009.

**Index Construction**

Each council has received a single risk rating from Risk Frontiers. These values are then spread across a range from 1.00 to 2.00 (the "Primary Index"), with the council with the highest environmental risk being allocated the maximum value of 2.00, and the council with the lowest environmental risk being allocated the minimum value of 1.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver, the lowest fire and flood risk being allocated the minimum value of 1.00.

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## *Example:* **Environmental Risk (Fire & Flood)**

| | | |
|---|---|---|
| Minimum Value | 0 Risk Rating | Primary Index of 1.00 |
| Maximum Value | 65.5 Risk Rating | Primary Index of 2.00 |

**Primary Index**

**= ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00**

Alpine  = ( (45.7 - 0) / (65.5 - 0) ) + 1.00

= 1.698

**Weighted Population Index (WPI)**

**= Primary Index x Population (Min 17,500)**

Alpine  = 1.698 x 17,500

= 29,710

**State Average Primary Index**

**= State Total WPI / Total Population (Min 15,000)**

State  = 8,165,298 / 7,054,867

= 1.157

**Cost Adjustor Index**

**= Primary Index / State Average Primary Index**

Alpine  = 1.698 / 1.157

= 1.467

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 4 | Indigenous Population |
|---|---|

**Objective**    Recognizes the impact on council services of providing services to residents of Aboriginal or Torres Strait Islander descent.

**Applied to**    The Indigenous Population Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Governance | Modified Population<br>- adjusted by vacancy rate<br>minimum 20,000 |
| Family & Community Services | Population |

**Source data**

- Australian Bureau of Statistics, Census 2021 – Cultural Diversity, LGA (UR) by ENGP Proficiency in Spoken English (not well and not at all), Local Government Area, downloaded Census TableBuilder, April 2023.
https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 Marchl 2024.
https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

**Index Construction**    The number of persons of Aboriginal or Torres Strait Islander descent in each local government area is divided by the total estimated resident population for 2012 to obtain a measure of the proportion of the population in each local government area of Aboriginal or Torres Strait Islander descent.

These values are then spread across a range from 1.00 to 2.00 (the "Primary Index"), with the council with the highest proportion of residents of Aboriginal or Torres Strait Islander descent being allocated the maximum value of 2.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by council's estimated resident population as at June (major cost driver).

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## Example:    Indigenous Population

| | | |
|---|---|---|
| Minimum Value | 0.24 | Primary Index of 1.00 |
| Maximum Value | 4.60 | Primary Index of 2.00 |

**Primary Index**    **= ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00**

Alpine        = ( (0.95 – 0.24) / (4.60 – 0.24) ) + 1.00

= 1.161

**Weighted Population Index (WPI)**    **= Primary Index x Population**

Alpine        = 1.161 x 13,648

= 15,768

**State Average Primary Index**    **= State Total WPI / Total Population**

State        = 7,991,391 / 6,815,373

= 1.173

**Cost Adjustor Index**    **= Primary Index / State Average Primary Index**

Alpine        = 1.161 / 1.173

= 0.990

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 5 | Language |
|---|---|

**Objective**    Recognizes the impact on council expenditure of providing services to residents with a low level of proficiency in English.

**Applied to**    The Language Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Governance | Vacancy Adjusted Population - Minimum 20,000 |
| Family & Community Services | Population |
| Aged & Disabled Services | Population > 60 Years and Disabled and Carer Allowances |
| Recreation & Culture | Population |

**Source data**
- Australian Bureau of Statistics, Census 2021 – Cultural Diversity, LGA (UR) by ENGP Proficiency in Spoken English (not well and not at all), Local Government Area, downloaded Census TableBuilder, April 2023.
  https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder

- Australian Bureau of Statistics, Census 2021 – Internal Migration, LGA (UR) by ENGP Proficiency in Spoken English and YARRP Year of Arrival in Australia, Arrivals by Year, Local Government Area, downloaded Census TableBuilder, March 2023.
  https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

**Index Construction**    The number of persons with a low level of proficiency in English for each c is divided by the total estimated resident population from the 2011 Census to obtain a measure of the proportion of the population in each local government area with low English proficiency.

This proportion is added to a 3-year average of arrivals data, calculated as a percentage of each council's population as at June 2011, and weighted 75:25 respectively. This is done to obtain a measure of changes to local population demographics since the Census.

These values are then spread across a range between 1.00 to 2.00 (the "Primary Index"), with the council with the highest proportion of residents with low English proficiency being allocated the maximum value of 2.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver (population or population greater than 60).

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## Example:    Language

| | |
|---|---|
| Minimum Value    0.13 | Primary Index of  1.00 |
| Maximum Value*    20.72 | Primary Index of  2.00 |

*excludes Greater Dandenong

**Primary Index** = **( (Council - Minimum) / (Maximum - Minimum) )  +  1.00**

Alpine    $= ( (1.24 - 0.13) / (20.72 - 0.13) ) + 1.00$

$= 1.054$

**Weighted Population Index (WPI)** = **Primary Index  x  Population**

Alpine    $= 1.054 \times 13{,}578$

$= 14{,}307$

**State Average Primary Index** = **State Total WPI  /  Total Population**

State    $= 8{,}731{,}912 / 6{,}815{,}373$

$= 1.281$

**Cost Adjustor Index** = **Primary Index  /  State Average Primary Index**

Alpine    $= 1.054 / 1.281$

$= 0.822$

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 6 | Population Dispersion |
|---|---|

**Objective**       Recognizes the impact on council expenditure of providing infrastructure and services to more than one population centre.

**Applied to**      The Population Dispersion Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Governance | Modified Population<br>- adjusted by vacancy rates<br>minimum 20,000 |
| Family & Community Services | Population |
| Aged & Disabled Services | Population > 60 Years<br>and Disabled<br>and Carer Allowances |
| Recreation and Culture | Population |
| Waste Management | Number of Dwellings |
| Traffic & Street Management | Population |
| Environment | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |
| Business & Economic Services | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |

**Source data**
- Australian Bureau of Statistics, Census 2021 - Population by Urban Centres and Localities, Place of Usual Residence, by Local Centres/Localities, Census TableBuilder, March 2023.   [calculations required to group by Local Government Area]

- Australian Bureau of Statistics, Census 2021 - Selected Dwelling Characteristics, Local Government Area by DWTD Dwelling Type, Occupied and Unoccupied Private Dwellings, downloaded Census TableBuilder, March 2023.
https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder

- Department of Social Services (DSS), Payment Demographic Data (Centrelink data), June 2023 Quarter
(Aged Pensioners, Disability Support Pensioners & Carers) - June 2023.
https://data.gov.au/dataset/dss-payment-demographic-data

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

- Google Maps online (calculation of distance).

Each council, town or locality (with a usual place of residence population, identified by the ABS) is taken into account in compiling the Population Dispersion cost adjustor.

The road distance between the centre in which the council is based and each separate town/locality was sourced from the VicRoads Country Directory or Google Maps online.

The number of dwellings from the Census has been adjusted by the estimated resident population.

**Index Construction**

The Commission has calculated a Population Dispersion Score for each separate town and locality in Victoria. This is the product of the proportion of the council's total enumerated population accounted for by the individual town/locality and the road distance from the town locality to the population centre in which the council is based.

For example, a town with 20% of a council's total enumerated population situated 35 kilometres from the centre in which the council is based would attract a score of 7.

This process is repeated for each town/locality to produce an aggregate Population Dispersion Score for each local government area. Account is also taken of the proportion of a council's population not recorded as residing in a separate town/locality, which is called the Rural Balance.

For councils with a single population centre (e.g. the majority of metropolitan councils), the Population Dispersion Score is zero.

These values are then spread across a range between 1.00 to 2.00 (the "Primary Index"), with the council with the highest calculated Population Dispersion Score being allocated the maximum value of 2.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver appropriate to that function.

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## Example:   Population Dispersion

| | | |
|---|---|---|
| Minimum Value | 0 | Primary Index of 1.00 |
| Maximum Value | 34.62 | Primary Index of 2.00 |

**Primary Index**

**= ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00**

Alpine   = ( (21.33 - 0) / (34.62 - 0) ) + 1.00

= 1.616

**Weighted Population Index (WPI)**

**= Primary Index  x  Population**

Alpine   = 1.616  x  13,578

= 21,945

**State Average Primary Index**

**= State Total WPI / Total Population**

State   = 7,630,392 / 6,815,373

= 1.120

**Cost Adjustor Index**

**= Primary Index / State Average Primary Index**

Alpine   = 1.616 / 1.120

= 1.444

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 7 | Population Growth |
|---|---|

**Objective**  Recognizes that areas of higher population growth require relatively greater council effort in some areas of service and infrastructure provision.

**Applied to**  The Population Growth Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Family & Community Services | Population |
| Traffic & Street Management | Population |
| Environment | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |

**Source data**
- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

**Index Construction**  Population Growth looks at the movement between the revised estimated population from 3 years prior and the preliminary estimated population of the most recent year. A population growth figure is calculated by taking the movement in the population over the three year period.

These values are then spread across a range from 1.00 to 2.00 (the "Primary Index"), with the council with the highest population growth being allocated the maximum value of 2.00 and the council with the lowest population growth being allocated the minimum value of 1.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver appropriate to that function (population or population with a minimum of 15,000).

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## *Example:*    **Population Growth**

| | |
|---|---|
| Minimum Value    -6.46 | Primary Index of  1.00 |
| Maximum Value*    19.46 | Primary Index of  2.00 |

*excludes Melbourne

**Primary Index** = ( (Council - Minimum) / (Maximum - Minimum) )  +  1.00

$$\text{Alpine} = ( (2.25 - -6.46) / (19.46 - -6.46) ) + 1.00$$
$$= 1.288$$

**Weighted Population Index (WPI)** = Primary Index  x  Population

$$\text{Alpine} = 1.288 \times 13{,}578$$
$$= 17{,}491$$

**State Average Primary Index** = State Total WPI / Total Population

$$\text{State} = 9{,}236{,}893 / 6{,}815{,}373$$
$$= 1.355$$

**Cost Adjustor Index** = Primary Index / State Average Primary Index

$$\text{Alpine} = 1.288 / 1.355$$
$$= 0.950$$

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 8 | Population Under 6 Years |
|---|---|

**Objective**  Recognizes the impact on council expenditure of providing services to children less than 6 years of age.

**Applied to**  The Population Under 6 Years Cost Adjustor is applied to the following expenditure function within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Family & Community Services | Population |

**Source data**
- Australian Bureau of Statistics, Estimated Residential Population, Table 1: ERP, Age by Sex, Local Government Area, at 30 June 2021 (p), Customised Report obtained, September 2022.

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

**Index Construction**  The population aged less than 6 years is divided by the total estimated resident population to obtain a measure of the proportion of the population within this age range.

These values are then spread across a range from 1.00 to 2.00 (the "Primary Index"), with the council with the highest proportion of children under 6 years allocated the maximum value of 2.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by council's estimated resident population as at June.

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average.  Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## *Example:* **Population < 6 years**

| | | |
|---|---|---|
| Minimum Value | 4.39 | Primary Index of 1.00 |
| Maximum Value* | 10.70 | Primary Index of 2.00 |

*excludes Melbourne & Queenscliffe

**Primary Index** = ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00

Alpine = ( (5.1 – 4.39) / (10.70 – 4.39) ) + 1.00

= 1.116

**Weighted Population Index (WPI)** = Primary Index x Population

Alpine = 1.116 x 13,578

= 15,151

**State Average Primary Index** = State Total WPI / Total Population

State = 9,660,413 / 6,815,373

= 1.417

**Cost Adjustor Index** = Primary Index / State Average Primary Index

Alpine = 1.116 / 1.417

= 0.787

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 9 | Regional Services |
|---|---|

**Objective**   Recognizes that some councils provide a range of services to a larger than average catchment area, increasing the demand on certain council services.

**Applied to**   The Regional Services Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Recreation and Culture | Population |
| Waste Management | Number of Dwellings |
| Traffic & Street Management | Population |
| Business & Economic Services | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |

**Source data**
- Australian Bureau of Statistics, Census 2021 - Employment, Income and Education, LGA (POW) by INDP – 1 Digit Level, Employment by Industry, downloaded Census TableBuilder, March 2023.
https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder
- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

Industry categories used:

- Retail Trade
- Accommodation and Food Services
- Information Media and Telecommunications
- Financial and Insurance Services
- Rental Hiring and Real Estate Services
- Professional Scientific and Technical Services
- Administrative and Support Services
- Public Administration and Safety
- Education and Training
- Health Care and Social Assistance
- Arts and Recreation Services
- Other Services

**Index Construction**

The estimated number of people working in service industries is divided by the total estimated resident population. An adjustment has been made to the results to take account of the significant numbers of people working in service employment in inner Melbourne, so that a maximum service employment-to-population ratio of 40% applies. This applies to the Cities of Melbourne, Port Phillip, Stonnington and Yarra.

The maximum service employment-to-population ratio of 40% has also been applied to the eight major regional centres in Victoria outside the metropolitan area with a population of greater than 20,000 persons - Greater Geelong, Ballarat, Greater Bendigo, Latrobe, Warrnambool, Greater Shepparton, Wodonga and Mildura) and to the Rural City of Horsham.

Total service industry employment equates to 25.5% of the Victorian population. Councils with a ratio of service industry employment-to-population above that average could be said to be net service providers (providing services to more than just their own residents) while those below the average could be said to be net service users, providing fewer services than their population requires.

The ratio of service industry employment-to-population ranges from a minimum of 0.10 to a maximum of 0.40. These values are then spread across a range from 1.00 to 2.00 (the "Primary Index"), with the councils with the highest ratio of service employment to population being allocated the maximum value of 2.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver appropriate to that function (population of population with a minimum of 15,000 persons).

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## Example:    Regional Services

| | | |
|---|---|---|
| Minimum Value | 10.00 | Primary Index of 1.00 |
| Maximum Value | 41.47 | Primary Index of 2.00 |

**Primary Index** = ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00

Alpine  = ( (33.69 - 10.00) / (41.47 - 10.00) ) + 1.00

= 1.753

**Weighted Population Index (WPI)** = Primary Index x Population

Alpine  = 1.753 x 13,578

= 23,800

**State Average Primary Index** = State Total WPI / Total Population

State  = 10,351,811 / 6,494,324

= 1.519

**Cost Adjustor Index** = Primary Index / State Average Primary Index

Alpine  = 1.753 / 1.519

= 1.154

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 10 | Remoteness |
|----|------------|

**Objective**     Recognises the impact of council expenditure resulting from remoteness from major service centres.

**Applied to**     The Remoteness Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|-----------------------|--------------------|
| Governance | Modified Population<br>- adjusted by vacancy rates<br>minimum 20,000 |
| Environment | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |
| Business & Economic Services | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |

**Source data**
- Hugo Centre (2018). Accessibility/Remoteness Index of Australia Plus 2016 (ARIA+ 2016).  Adelaide, South Australia: Hugo Centre for Migration and Population Research, the University of Adelaide, March 2018.

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

ARIA seeks to measure remoteness, which can be interpreted as access to a range of services, some of which are available in smaller and others in larger centres. The remoteness of a location can thus be measured in terms of how far one has to travel to centres of various sizes.

ARIA interprets remoteness as accessibility to 201 service centres throughout Australia. Remoteness is measured in terms of access along a road network from 11,340 populated localities to four categories of service centres.

Service centres are ABS defined Urban Centres with a population of 5,000 or greater as at the 2006 Census.  The service centres were grouped into four categories:

| | |
|--|--|
| Cat A: | Greater than 250,000 persons |
| Cat B: | 48,000 - 249,000 persons |
| Cat C: | 18,000 - 47,999 persons |
| Cat D: | 5,000 - 17,999 persons |

There are 201 Service Centres in Australia and 44 in Victoria.

The minimum distance from each populated location to the nearest service centre in each of the four categories was calculated to give four measurements per locality. Each distance was converted to a ratio to the mean distance of all localities across Australia within that service centre category, each of which has a ratio ranging from 0 to 3. A single remoteness indicator for that locality is then calculated.

Thus an ARIA score was obtained for each of the 11,340 localities across Australia. This was then interpolated on to a 1 kilometre grid so that ARIA values could be obtained for various graphical areas.

| Categories of Remoteness | Aria Score Ranges |
|---|---|
| Highly Accessible | 0 - 1.84 |
| Accessible | 1.84 - 3.51 |
| Moderately Accessible | 3.51 - 5.80 |
| Remote | 5.80 - 9.08 |
| Very Remote | 9.08 – 12 |

GISCA remains the source compilation of the spatial data. They use Geographical Information System (GIS) network analysis to calculate actual distance travelled by road from localities to service centres. Note that as ARIA is a national index the categories of Remote and Very Remote do not apply in Victoria. The ARIA range for Victoria is 0 - 5.8.

**Index Construction**

The Commission has derived an index by taking an average of the ARIA indices for the Statistical Local Areas (SLAs) to obtain an ARIA index for the Local Government Areas (LGAs). The LGA ARIA index has a range of between 0 - 4.66. This index is then converted to a range between 1.00 to 2.00 and which becomes the "Primary Index".

A state average of the Primary Index is obtained by weighting each council's Primary Index by its estimated population as at June 2011 (using double population up to a maximum of 15,000 people for small councils).

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## Example:    Remoteness

| | | |
|---|---|---|
| Minimum Value | 0 | Primary Index of 1.00 |
| Maximum Value | 5.62 | Primary Index of 2.00 |

**Primary Index**   **= ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00**

Alpine       = ( (3.25 - 0) / (5.62 - 0) ) + 1.00

= 1.578

**Weighted Population Index (WPI)**   **= Primary Index x Population (Min 15,000)**

Alpine       = 1.578 x 17,500

= 27,620

**State Average Primary Index**   **= State Total WPI / Total Population (Min 15,000)**

State       = 7,738,122 / 7,054,867

= 1.097

**Cost Adjustor Index**   **= Primary Index / State Average Primary Index**

Alpine       = 1.578 / 1.097

= 1.439

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 11 | Socio-Economic |
|---|---|

**Objective**   Recognizes that residents of areas of relative socio-economic disadvantage will make a greater call on certain council services than will residents of areas of relative socio-economic advantage.

**Applied to**   The Socio-Economic Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Family & Community Services | Population |
| Aged & Disabled Services | Population > 60 Years and Disabled and Carer Allowances |

**Source data**
- Australian Bureau of Statistics, Census 2021, 2033.0 Socio-Economic Indexes of Australia (SEIFA), released 27 April 2023.
  https://www.abs.gov.au/statistics/people/people-and-communities/socio-economic-indexes-areas-seifa-australia/latest-release
- Department of Social Services (DSS), Payment Demographic Data (Centrelink data), June 2023 Quarter
  (Aged Pensioners, Disability Support Pensioners & Carers) - June 2023.
  https://data.gov.au/dataset/dss-payment-demographic-data
- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

Of the four indices, the Index of Relative Socio-Economic Disadvantage reflects the profile of the economic resources of families within the local government areas. The Census variables summarised by this index reflect the income and expenditure of families, such as income and rent.

Additionally, variables that reflect wealth, such as dwelling size, are also included. The income variables are specified by family structure, since this affects disposable income.

**Index Construction**   These values are spread across a range from 1.00 to 2.00 (the "Primary Index"), with the council with the lowest index of Relative Socio-Economic Disadvantage being allocated the maximum value of 2.00 and the council with the highest index of Relative Socio-Economic Disadvantage being allocated the minimum value of 1.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver (population or population greater than 60 years).

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

## Example: Socio-Economic

| | | | |
|---|---|---|---|
| Minimum Value | 887 | | Primary Index of 1.00 |
| Maximum Value | 1,093 | | Primary Index of 2.00 |

**Primary Index** = ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00

Alpine = ( (1,028 - 887) / (1,093 - 887) ) + 1.00

= 1.316

**Weighted Population Index (WPI)** = Primary Index x Population

Alpine = 1.316 x 13,578

= 17,862

**State Average Primary Index** = State Total WPI / Total Population

State = 9,545,164 / 6,815,373

= 1.401

**Cost Adjustor Index** = Primary Index / State Average Primary Index

Alpine = 1.316 / 1.401

= 0.939

Victorian Local Government Grants Commission

# General Purpose Grants – Cost Adjustors

| 12 | Tourism |
|----|---------|

**Objective**   Recognizes that councils in areas attracting significant numbers of tourists have additional expenditure requirements.

**Applied to**   The Tourism Cost Adjustor is applied to the following expenditure functions within the Commission's general purpose grants model:

| Expenditure Function: | Major Cost Driver: |
|---|---|
| Recreation & Culture | Population |
| Waste Management | Number of Dwellings |
| Traffic & Street Management | Population |
| Business & Economic Services | Modified Population<br>- adjusted by vacancy rates<br>doubled to maximum 15,000 |

**Source data**
- Tourism Research Australia, 2018-19 (unpublished/customised data), Visitor Survey (International Visitors, Overnight Visitors and Daytrips), Nights - 4 year averages, by Local Government Area, ordered September 2019.

- Australian Bureau of Statistics, Regional Population Growth, Australia, (cat no. 3218.0), Table 2. Estimated Residential Population, Local Government Area, at 30 June 2023, released 26 March 2024.
  https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

The Tourism Research Australia's National and International Visitor Surveys are a major source of information on the characteristics and travel patterns of domestic and international tourists. They measures travel for all reasons, including holiday and leisure travel, business travel and travel to visit friends and/or relatives. The National Visitor Survey is based on personal interviews with 20,000 overseas visitors.

Three components of the National Visitor Survey are used by the VGC.

International Visitors:   Data on numbers of international tourists to each region sourced from the International Visitor Survey.

Overnight Stays:   An overnight trip is defined as a trip involving a stay away from home for at least one night, at a place at least 40 kilometres from home. This includes nights stayed in all accommodation establishments, including private holiday homes.

Day Visitors:   A day visitor is defined as a person making a round trip for a non-routine purpose of at least 50 kilometres, who is away from home for at least 24 hours.

It should be noted that the populations of Alpine Resort areas are included for :

- Alpine Shire Council
- Baw Baw Shire Council
- Mansfield Shire Council

**Index Construction**

The number of overnight stays and the number of day visitors available on a council basis are divided by the estimated resident population. In 2016, this data was averaged over 4 years due to yearly fluctuations.

The number of overnight stays and the number of day visitors and the number of international visitors for each local government area or sub-region have been divided by the estimated resident population of that local government area or sub-region to obtain estimates of:

- the number of international visitors nights per capita
- the number of overnight stays per capita
- the number of day visitors per capita

The estimated number of international visitor nights per capita, the estimated number of overnight visitors per capita and the estimated number of day visitors per capita are added together to produce an estimate of the total number of visitors per capita, on either a local government area or sub-regional basis. The numbers obtained for each sub-region are assumed to apply to all councils in that sub-region.

These values are then spread across a range from 1.00 to 2.00 (the "Primary Index"), with the council with the highest number of visitors per capita being allocated the maximum value of 2.00.

A state average of the Primary Index is obtained by weighting each council's Primary Index by the relevant major cost driver (population or population with a minimum of 15,000 persons).

The Cost Adjustment Index (CAI) is the ratio of each council's Primary Index to the state average. Councils with a CAI above the state-wide average are assessed as having relatively higher expenditure needs than councils with a CAI below the state average.

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## Example: Tourism

| | | |
|---|---|---|
| Minimum Value | 5.9 per capita | Primary Index of 1.00 |
| Maximum Value* | 111.9 per capita | Primary Index of 2.00 |

*excludes Alpine, Mansfield, Melbourne & Queenscliffe*

**Primary Index** = ( (Council - Minimum) / (Maximum - Minimum) ) + 1.00

Alpine = ( (179.3 – 5.9) / (111.9 – 5.9) ) + 1.00

= 2.000

**Weighted Population Index (WPI)** = Primary Index x Population

Alpine = 2.000 x 13,279

= 26,558

**State Average Primary Index** = State Total WPI / Total Population

State = 7,705,091 / 6,595,983

= 1.168

**Cost Adjustor Index** = Primary Index / State Average Primary Index

Alpine = 2.000 / 1.168

= 1.712